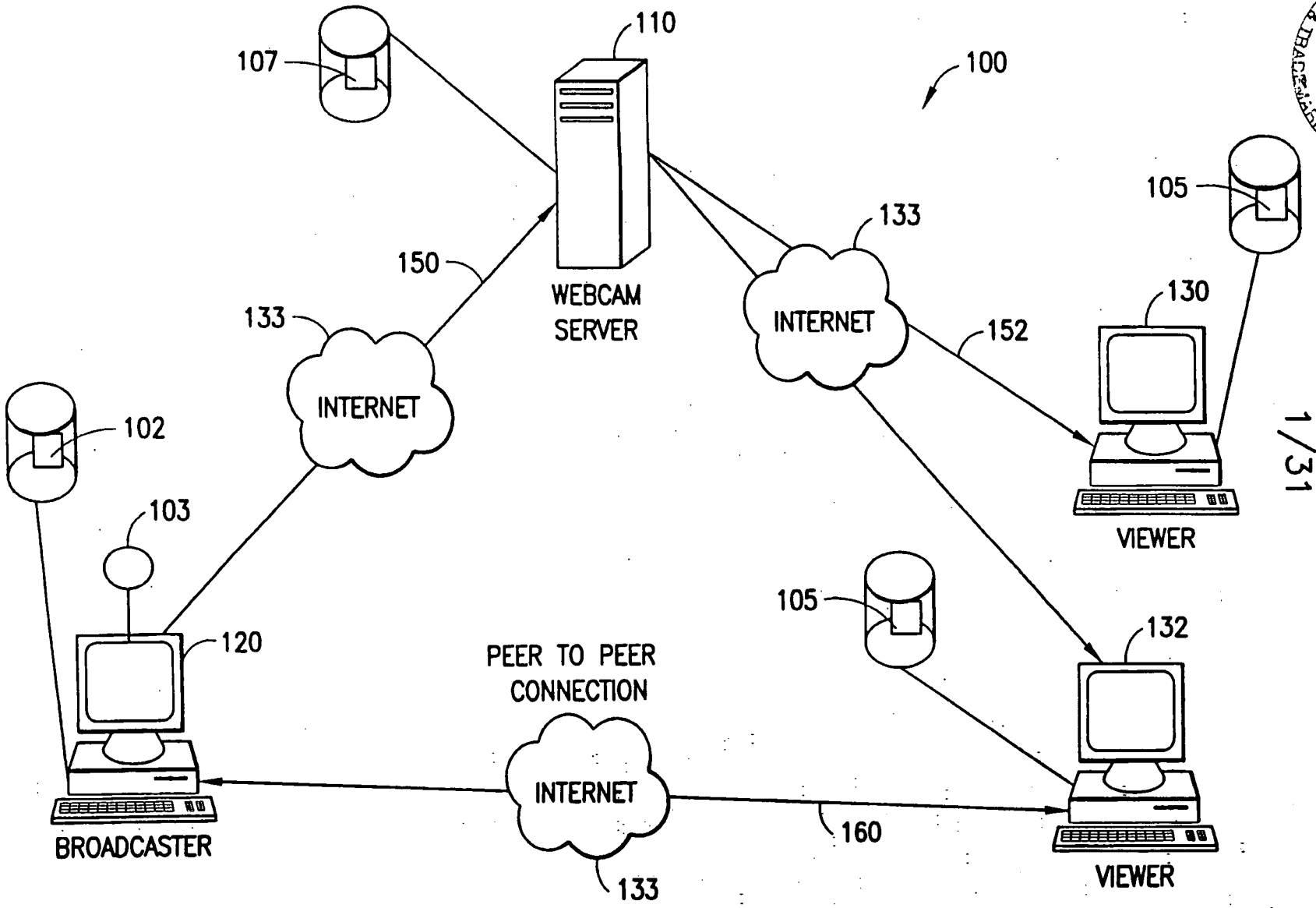

FIG.1

PATENT & TRADEMARK OFFICE
NOV 26 2003

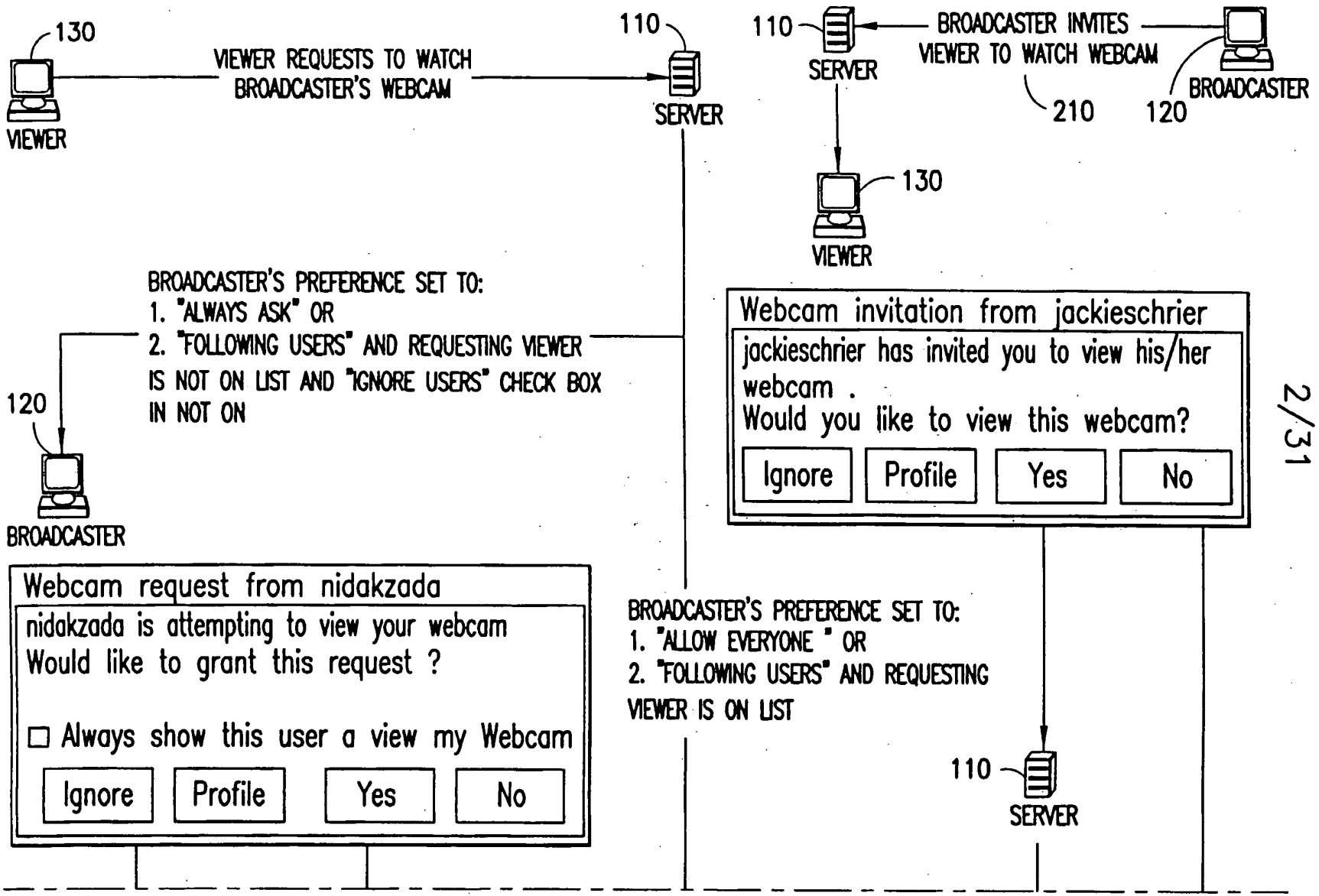
130
VIEWER
VIEWER REQUESTS TO WATCH BROADCASTER'S WEBCAM
110
SERVER
110
SERVER
BROADCASTER INVITES VIEWER TO WATCH WEBCAM
210
120
BROADCASTER
130
VIEWER
BROADCASTER'S PREFERENCE SET TO:
1. "ALWAYS ASK" OR
2. "FOLLOWING USERS" AND REQUESTING VIEWER IS NOT ON LIST AND "IGNORE USERS" CHECK BOX IN NOT ON
120
BROADCASTER
Webcam invitation from jackieschrier
jackieschrier has invited you to view his/her webcam .
Would you like to view this webcam?
Ignore
Profile
Yes
No
Webcam request from nidakzada
nidakzada is attempting to view your webcam
Would like to grant this request ?
☐ Always show this user a view my Webcam
Ignore
Profile
Yes
No
BROADCASTER'S PREFERENCE SET TO:
1. "ALLOW EVERYONE " OR
2. "FOLLOWING USERS" AND REQUESTING VIEWER IS ON LIST
110
SERVER

FIG.2A–1

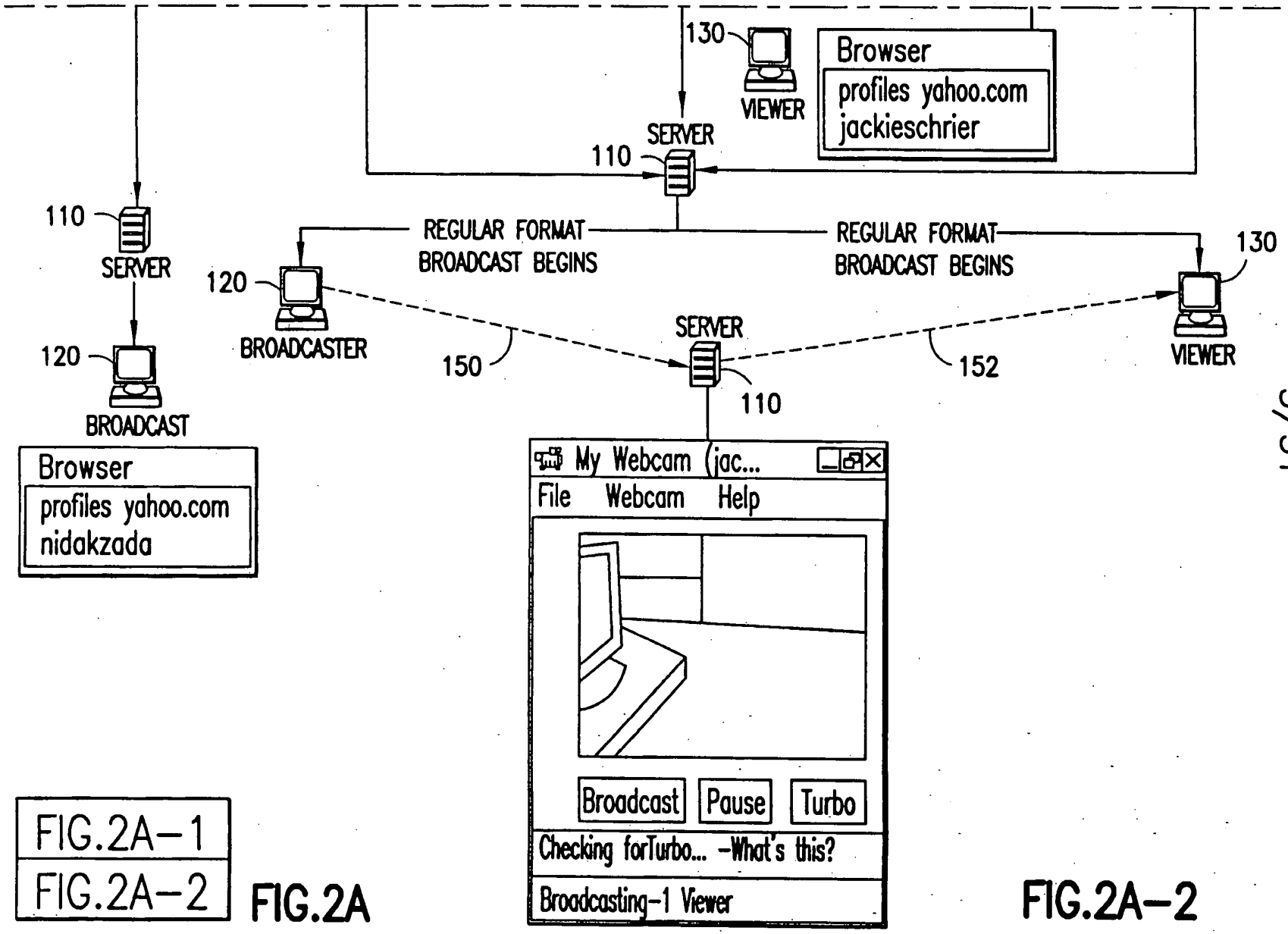

FIG.2A-1
FIG.2A-2

FIG.2A

FIG.2A-2

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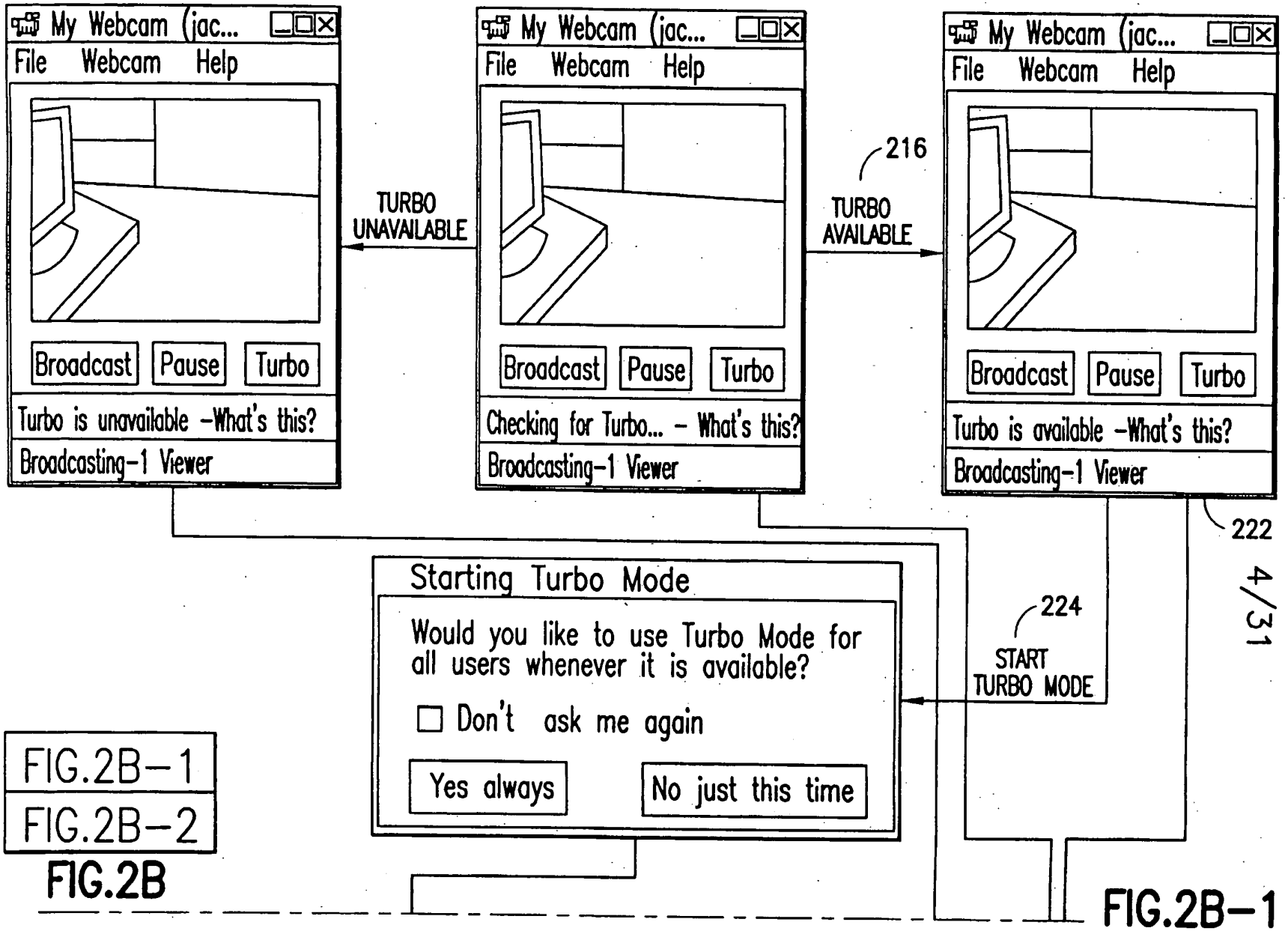


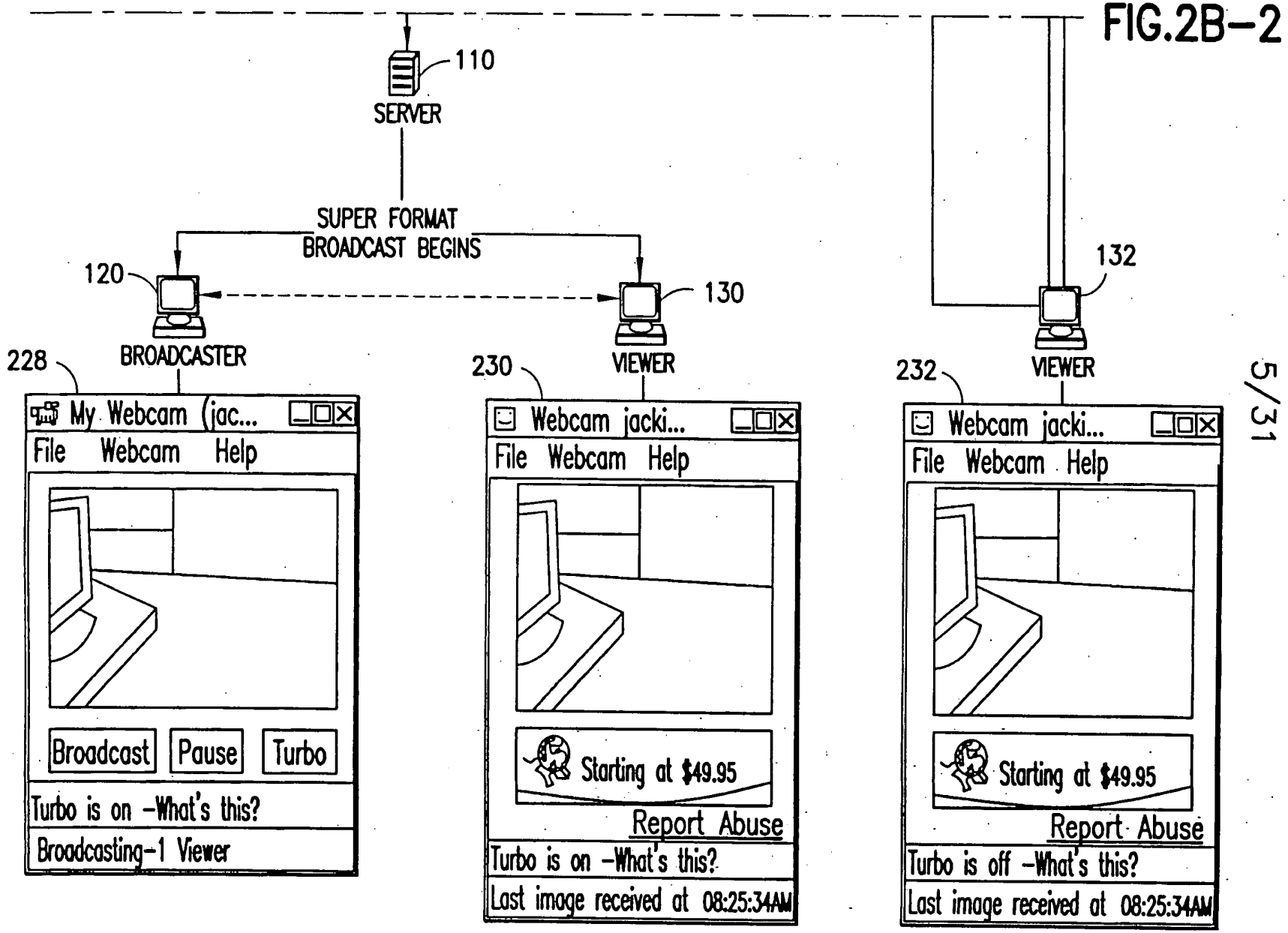
FIG.2B-1

FIG.2B-2

FIG.2B

FIG.2B-1

FIG.2B-2


110
SERVER
SUPER FORMAT
BROADCAST BEGINS
120
BROADCASTER
130
VIEWER
132
VIEWER
228
My Webcam (jac...
File Webcam Help
Broadcast
Pause
Turbo
Turbo is on -What's this?
Broadcasting-1 Viewer
230
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is on -What's this?
Last image received at 08:25:34AM
232
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is off -What's this?
Last image received at 08:25:34AM

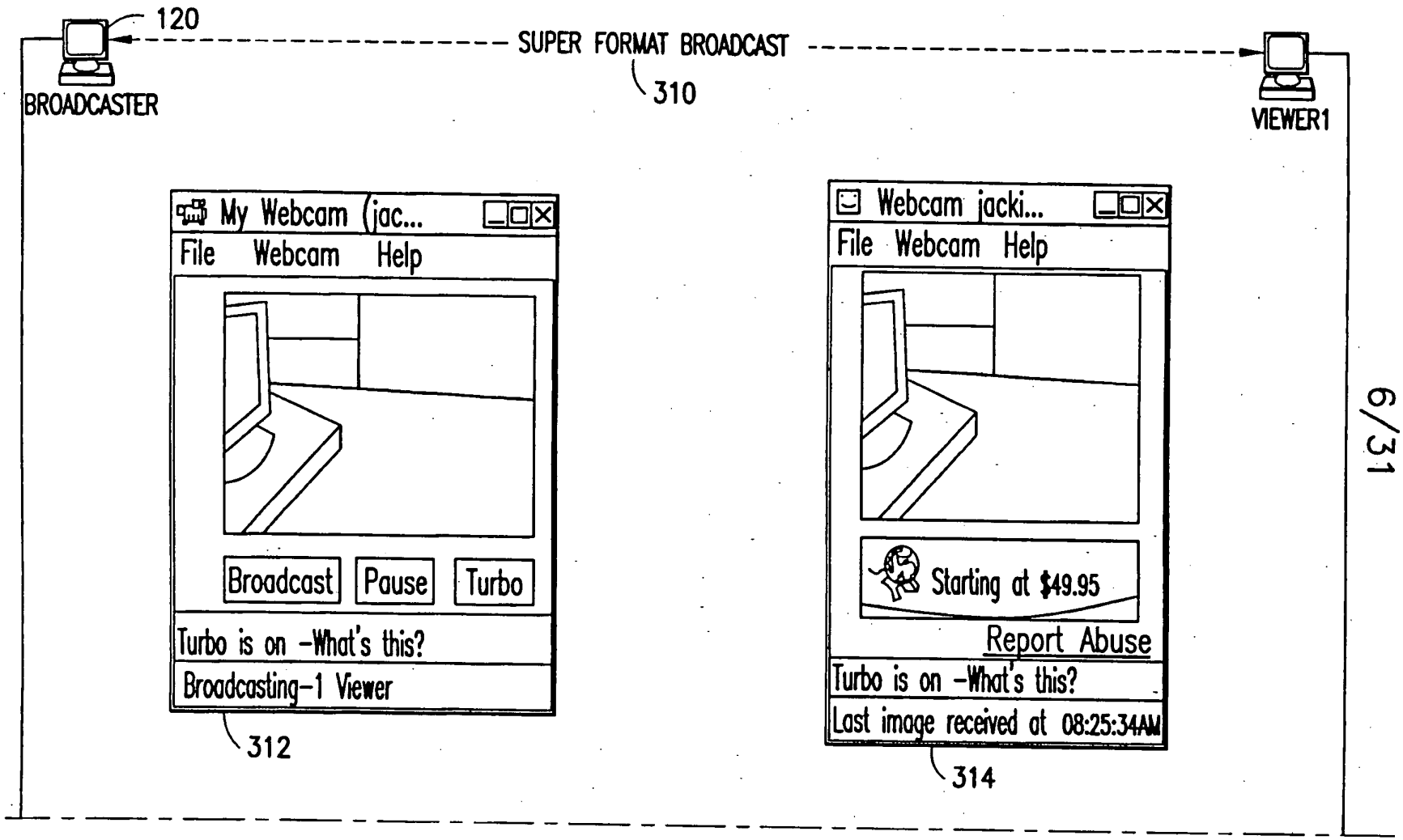


FIG.3A-1

FIG.3A-1
FIG.3B-2

FIG.3A

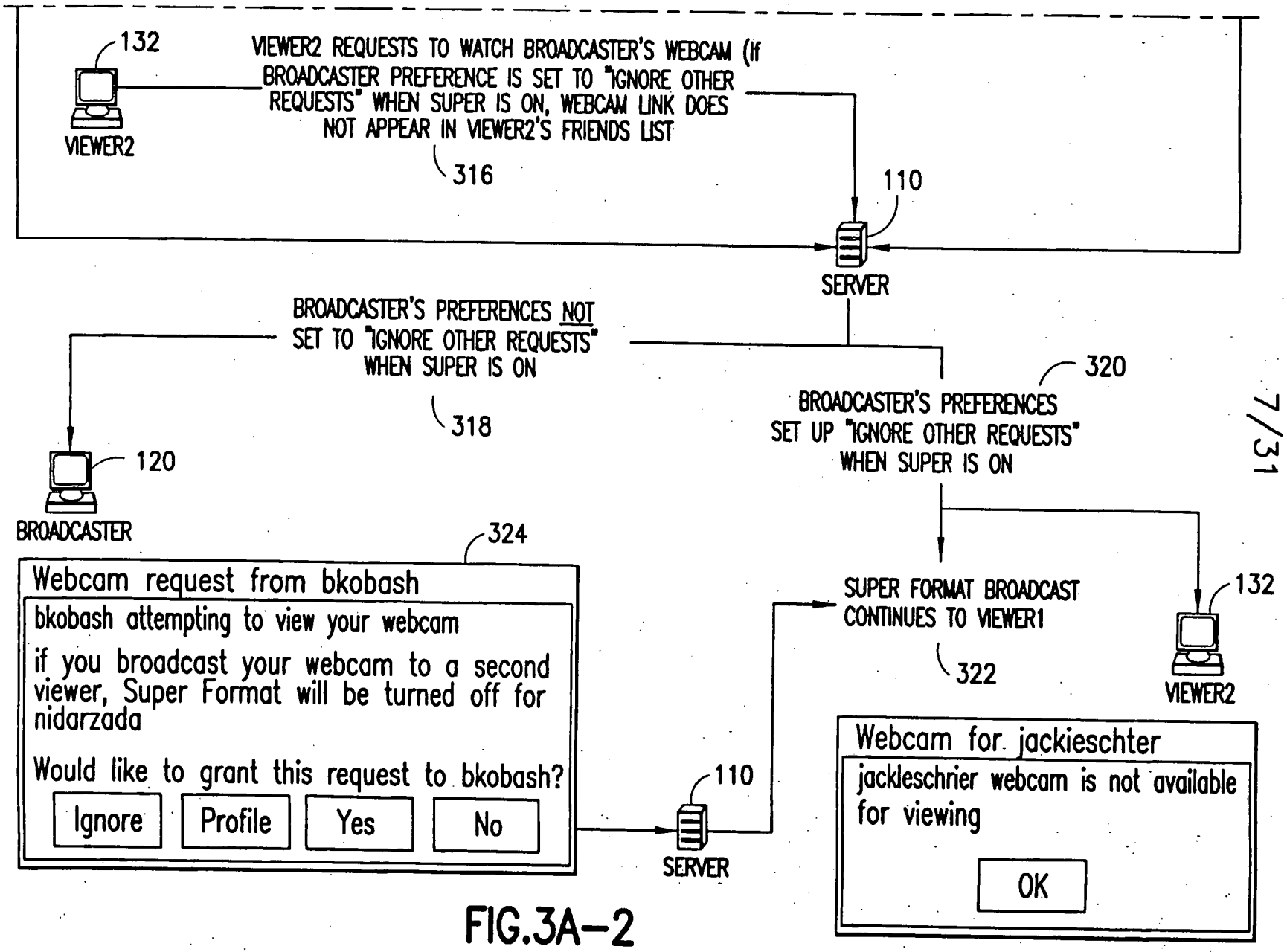

132
VIEWER2
VIEWER2 REQUESTS TO WATCH BROADCASTER'S WEBCAM (If BROADCASTER PREFERENCE IS SET TO "IGNORE OTHER REQUESTS" WHEN SUPER IS ON, WEBCAM LINK DOES NOT APPEAR IN VIEWER2'S FRIENDS LIST
316
110
SERVER
BROADCASTER'S PREFERENCES NOT SET TO "IGNORE OTHER REQUESTS" WHEN SUPER IS ON
318
320
BROADCASTER'S PREFERENCES SET UP "IGNORE OTHER REQUESTS" WHEN SUPER IS ON
120
BROADCASTER
324
Webcam request from bkobash
bkobash attempting to view your webcam
if you broadcast your webcam to a second viewer, Super Format will be turned off for nidarzada
Would like to grant this request to bkobash?
Ignore
Profile
Yes
No
110
SERVER
SUPER FORMAT BROADCAST CONTINUES TO VIEWER1
322
132
VIEWER2
Webcam for jackieschter
jackleschrier webcam is not available for viewing
OK

FIG.3A-2

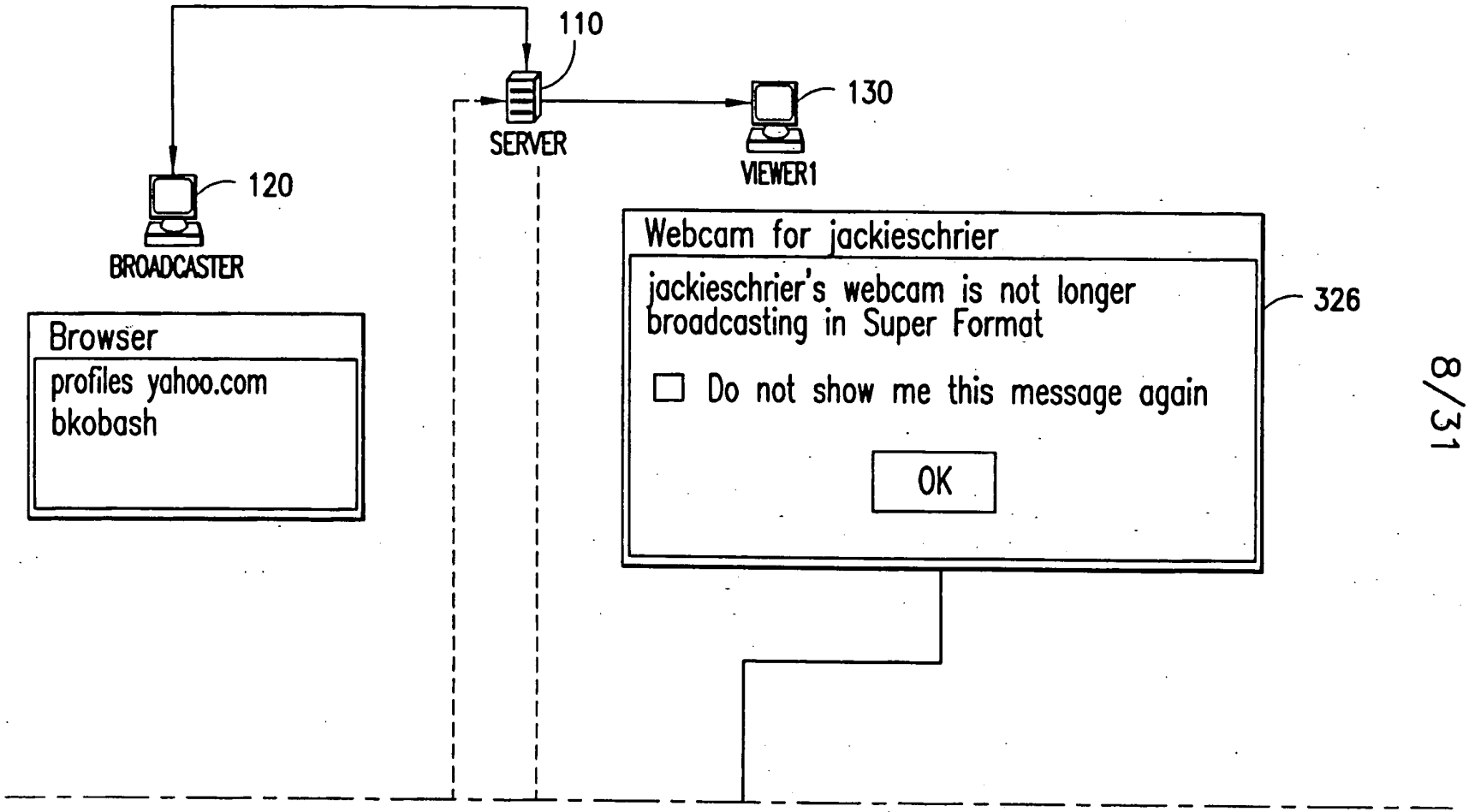


FIG.3B-1

FIG.3B-1
FIG.3B-2

FIG.3B

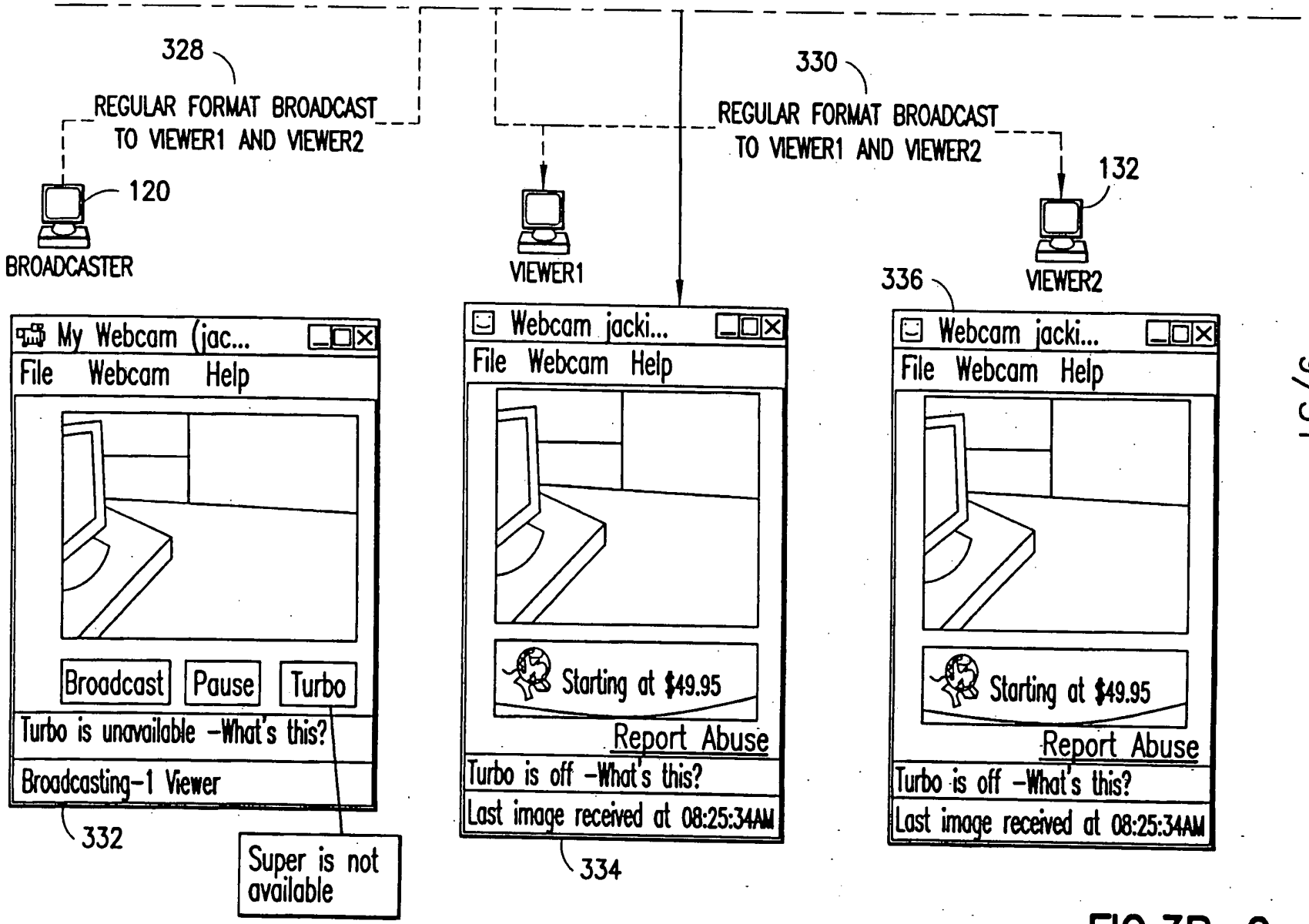

328
REGULAR FORMAT BROADCAST
TO VIEWER1 AND VIEWER2
330
REGULAR FORMAT BROADCAST
TO VIEWER1 AND VIEWER2
120
BROADCASTER
VIEWER1
132
VIEWER2
336
My Webcam (jac...
File Webcam Help
Broadcast
Pause
Turbo
Turbo is unavailable -What's this?
Broadcasting-1 Viewer
332
Super is not available
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is off -What's this?
Last image received at 08:25:34AM
334
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is off -What's this?
Last image received at 08:25:34AM

FIG.3B-2

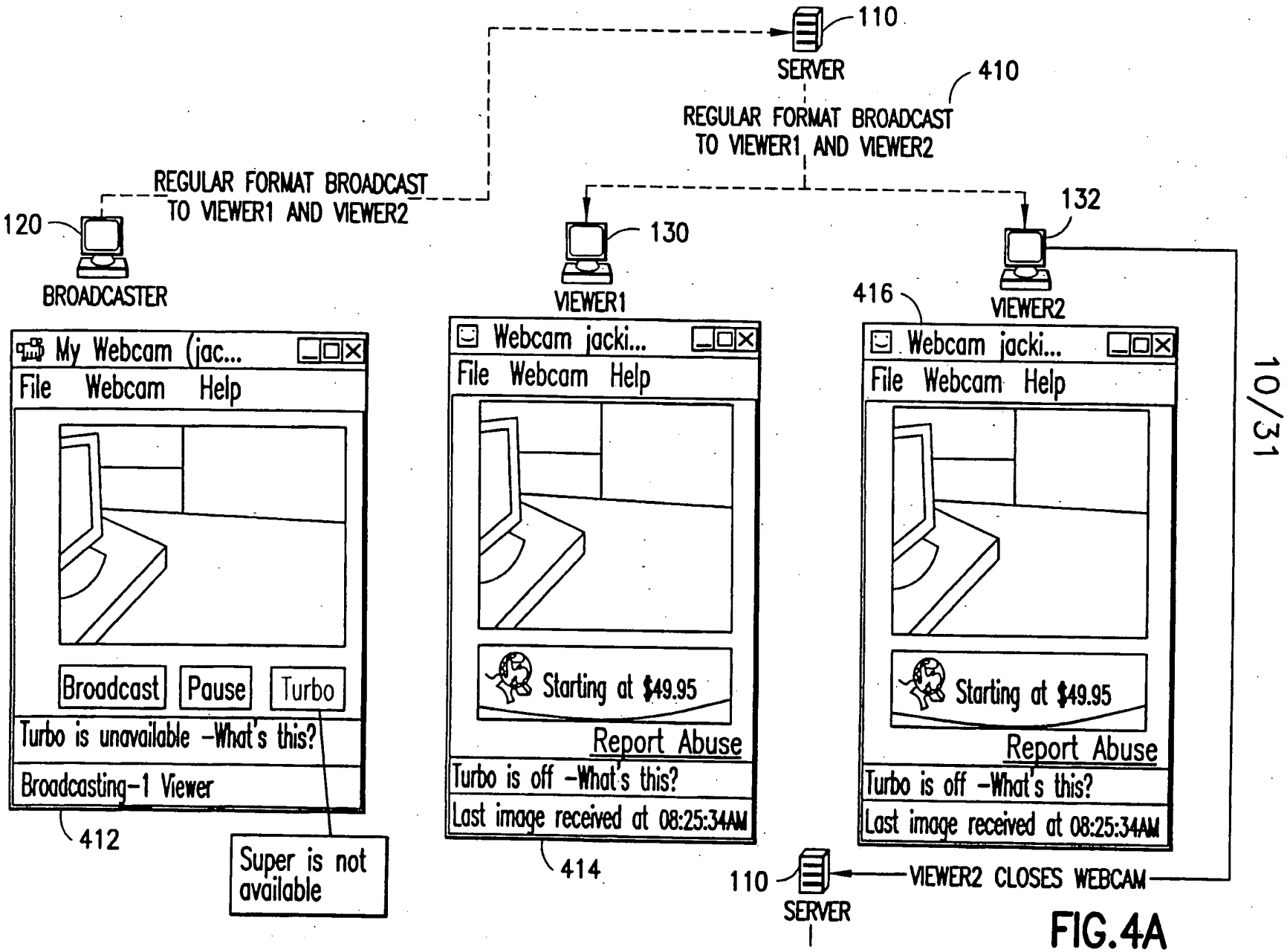

110
SERVER
410
REGULAR FORMAT BROADCAST
TO VIEWER1 AND VIEWER2
REGULAR FORMAT BROADCAST
TO VIEWER1 AND VIEWER2
120
BROADCASTER
130
VIEWER1
132
VIEWER2
416
My Webcam (jac...
File Webcam Help
Broadcast
Pause
Turbo
Turbo is unavailable -What's this?
Broadcasting-1 Viewer
412
Super is not available
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is off -What's this?
Last image received at 08:25:34AM
414
Webcam jacki...
File Webcam Help
Starting at $49.95
Report Abuse
Turbo is off -What's this?
Last image received at 08:25:34AM
110
SERVER
VIEWER2 CLOSES WEBCAM
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FIG.4A

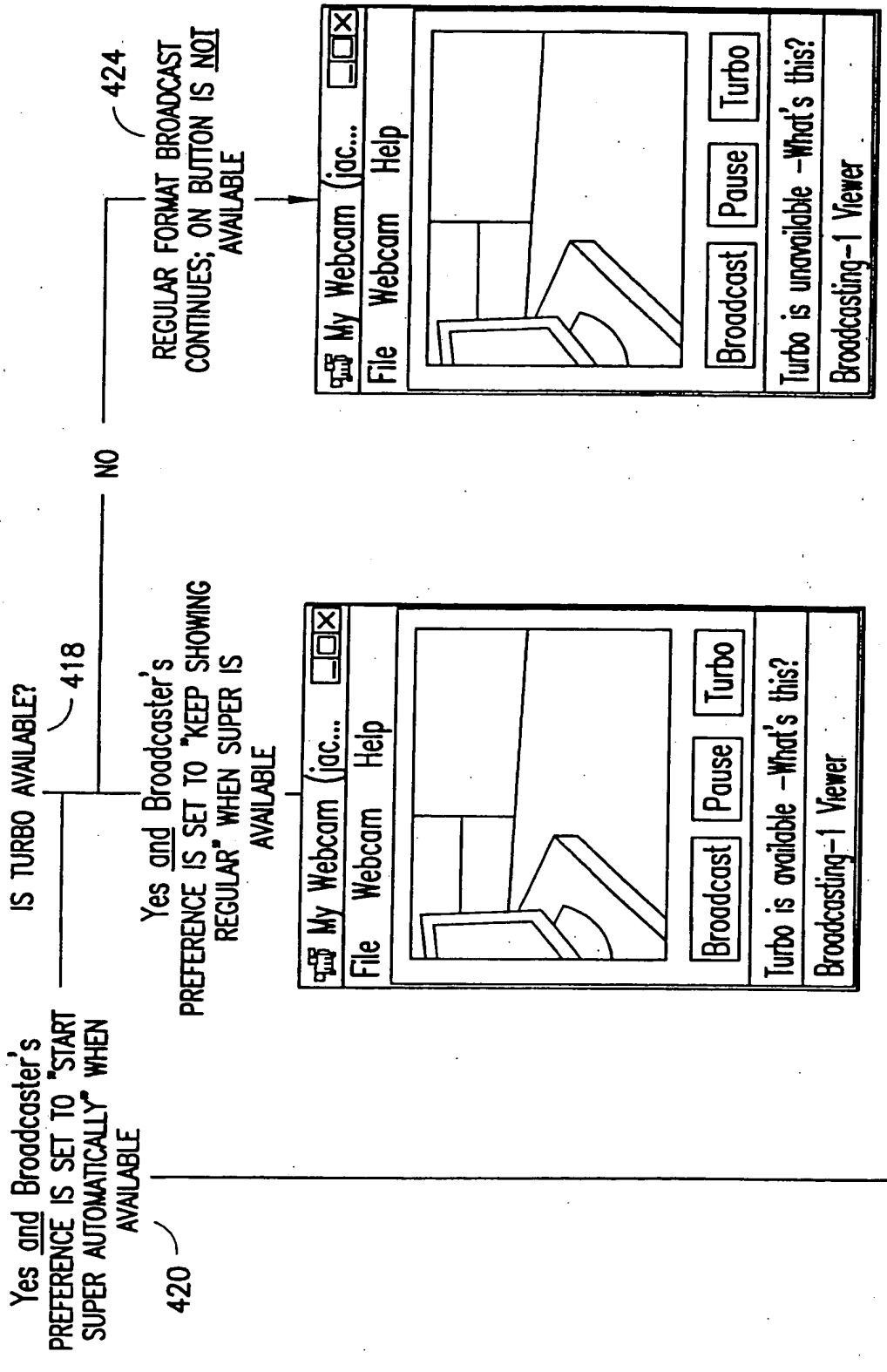
Yes and Broadcaster's PREFERENCE IS SET TO "START SUPER AUTOMATICALLY" WHEN AVAILABLE
420
IS TURBO AVAILABLE?
418
Yes and Broadcaster's PREFERENCE IS SET TO "KEEP SHOWING REGULAR" WHEN SUPER IS AVAILABLE
NO
REGULAR FORMAT BROADCAST CONTINUES; ON BUTTON IS NOT AVAILABLE
424
My Webcam (jac...
File Webcam Help
Broadcast
Pause
Turbo
Turbo is available -What's this?
Broadcasting-1 Viewer
My Webcam (jac...
File Webcam Help
Broadcast
Pause
Turbo
Turbo is unavailable -What's this?
Broadcasting-1 Viewer

FIG.4B-1

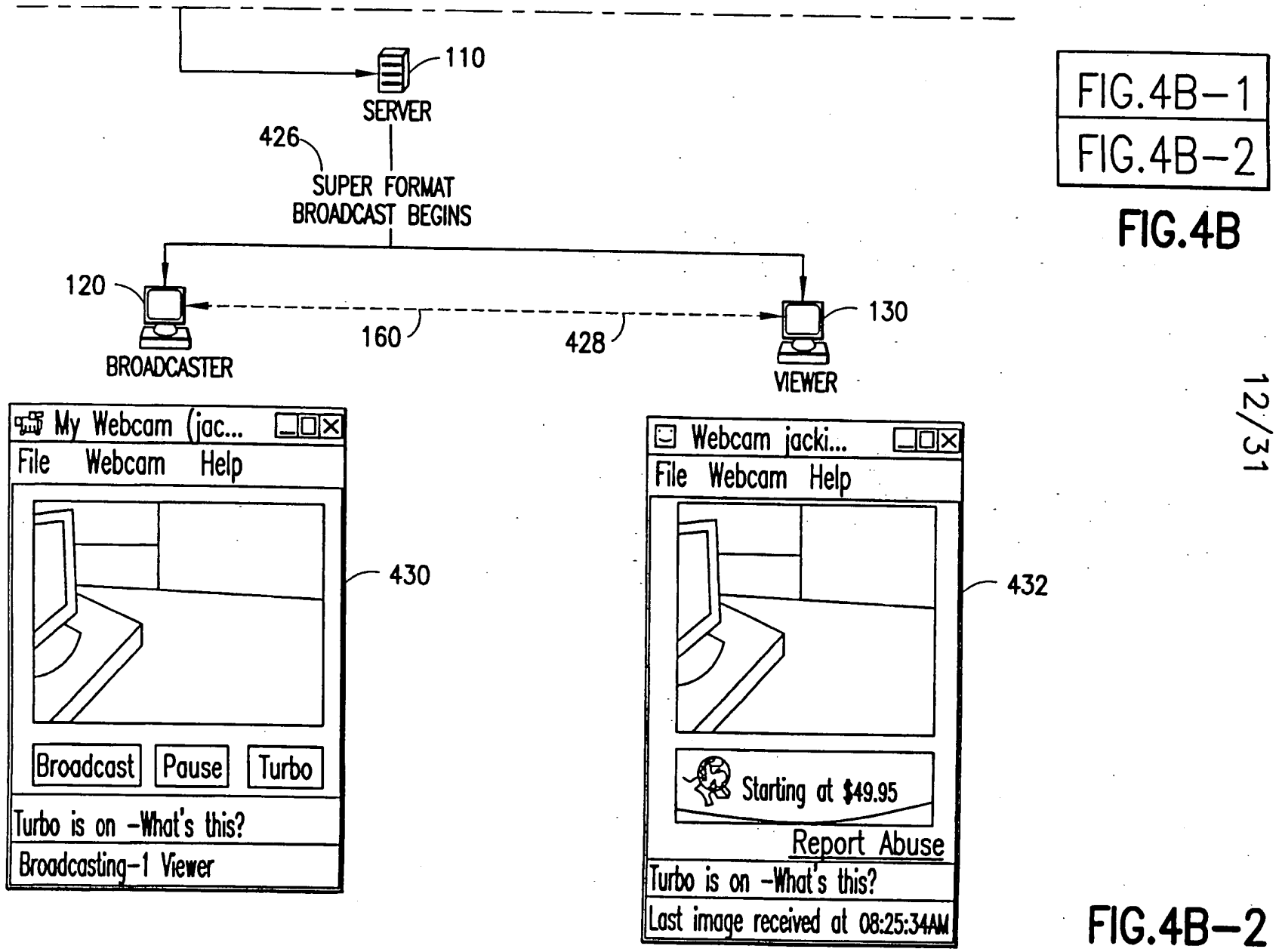

FIG.4B-1
FIG.4B-2

FIG.4B

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FIG.4B-2

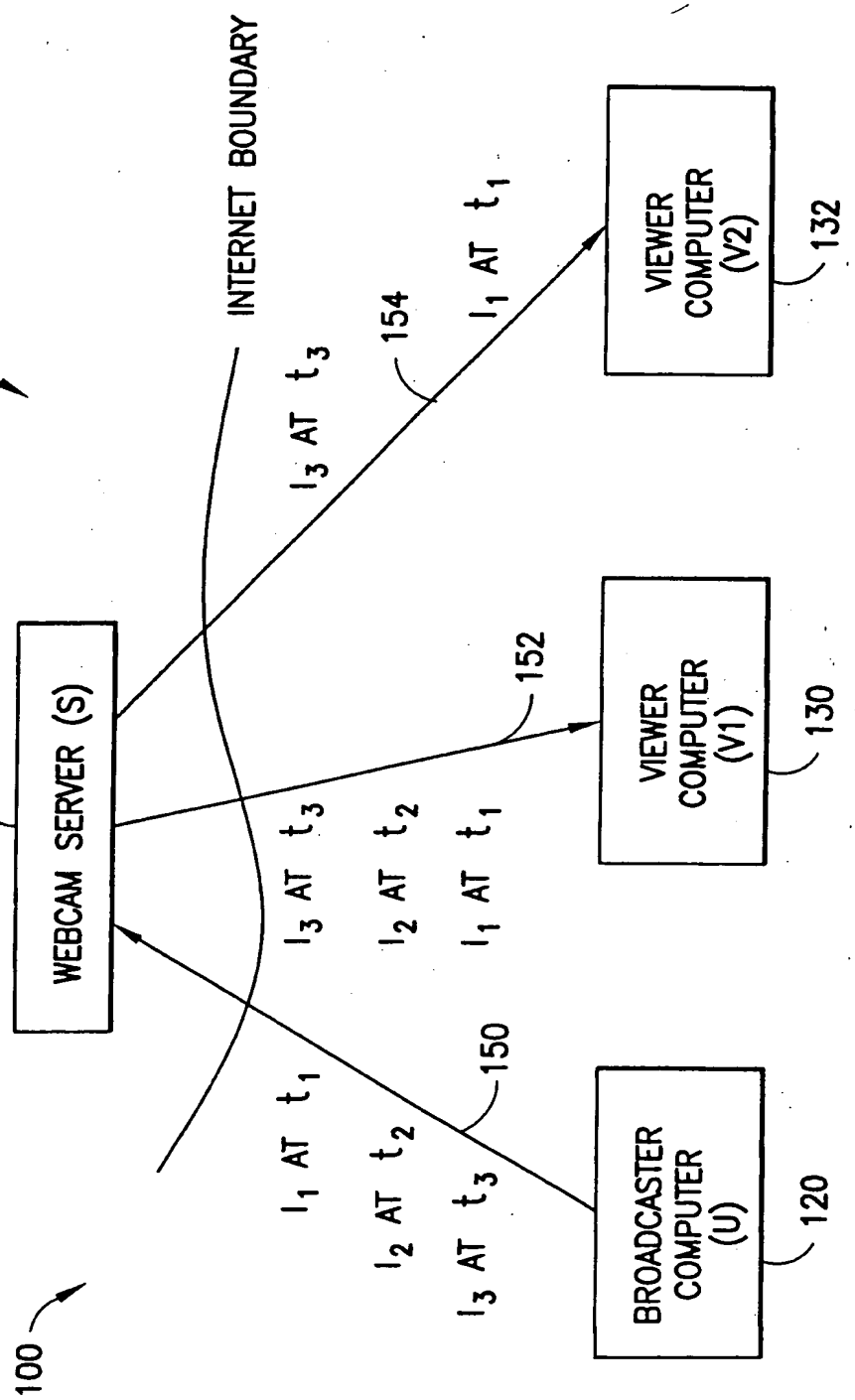

500
INTERNET BOUNDARY
WEBCAM SERVER (S)
110
100
I_3 AT t_3
154
I_1 AT t_1
VIEWER COMPUTER (V2)
132
152
I_3 AT t_3
I_2 AT t_2
I_1 AT t_1
VIEWER COMPUTER (V1)
130
I_1 AT t_1
I_2 AT t_2
I_3 AT t_3
150
BROADCASTER COMPUTER (U)
120

FIG.5

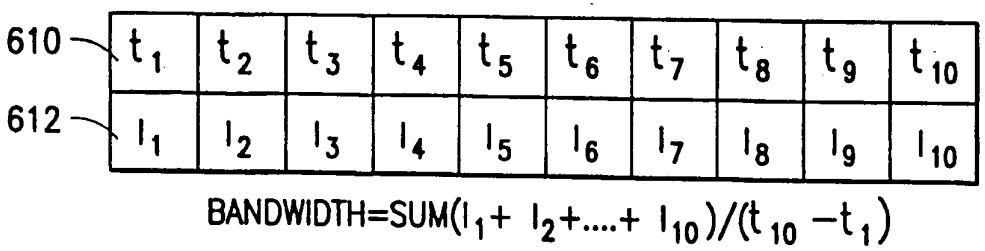

610
612
600
t_1 t_2 t_3 t_4 t_5 t_6 t_7 t_8 t_9 t_{10}
I_1 I_2 I_3 I_4 I_5 I_6 I_7 I_8 I_9 I_{10}
BANDWIDTH=SUM(I_1+ I_2+....+ I_{10})/(t_{10} −t_1)

FIG.6

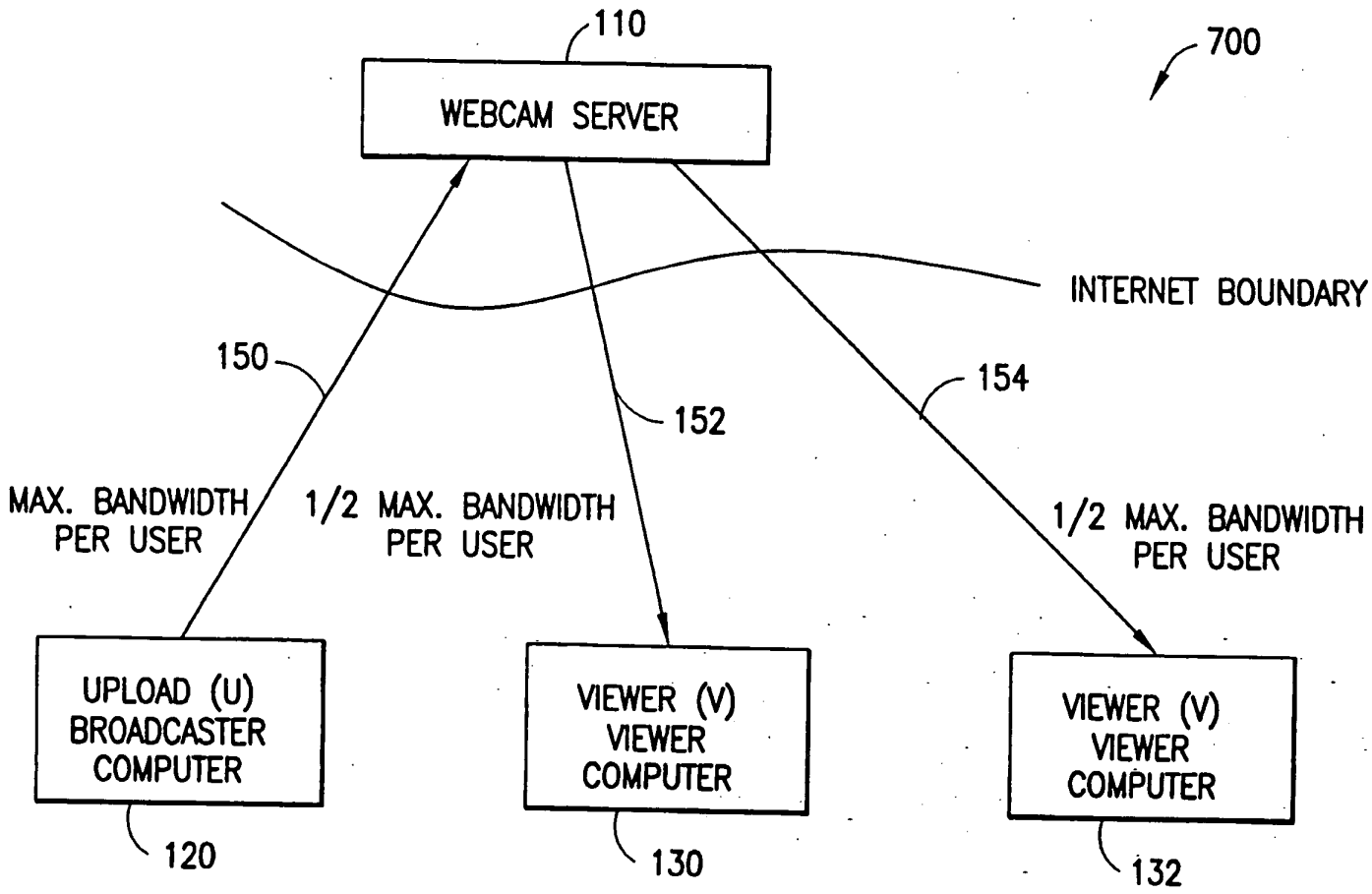

110
700
WEBCAM SERVER
INTERNET BOUNDARY
150
152
154
MAX. BANDWIDTH PER USER
1/2 MAX. BANDWIDTH PER USER
1/2 MAX. BANDWIDTH PER USER
UPLOAD (U) BROADCASTER COMPUTER
VIEWER (V) VIEWER COMPUTER
VIEWER (V) VIEWER COMPUTER
120
130
132

FIG.7

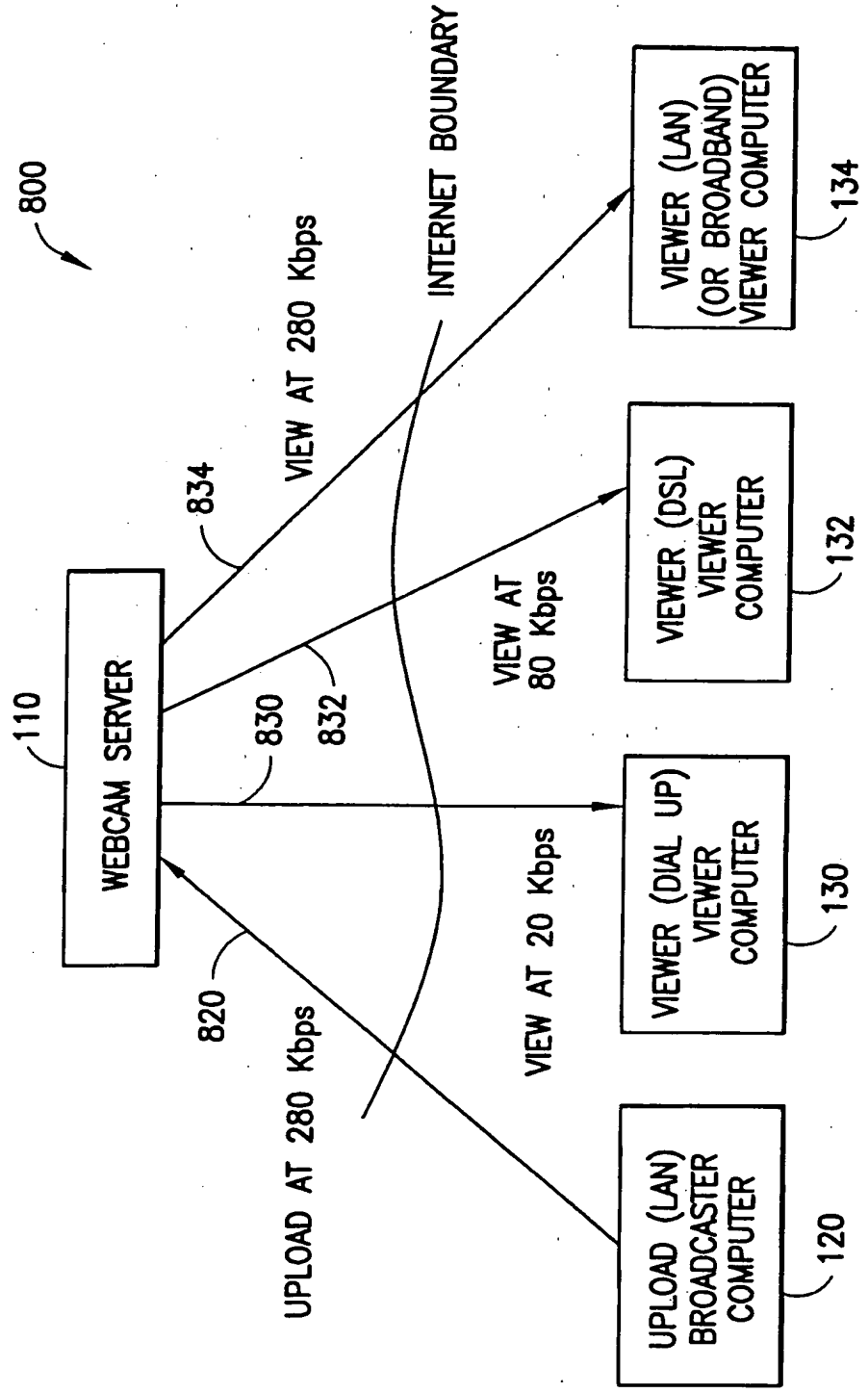

800
110
WEBCAM SERVER
820
UPLOAD AT 280 Kbps
830
832
834
VIEW AT 280 Kbps
INTERNET BOUNDARY
VIEW AT 80 Kbps
VIEW AT 20 Kbps
UPLOAD (LAN) BROADCASTER COMPUTER
120
VIEWER (DIAL UP) VIEWER COMPUTER
130
VIEWER (DSL) VIEWER COMPUTER
132
VIEWER (LAN) (OR BROADBAND) VIEWER COMPUTER
134

FIG.8

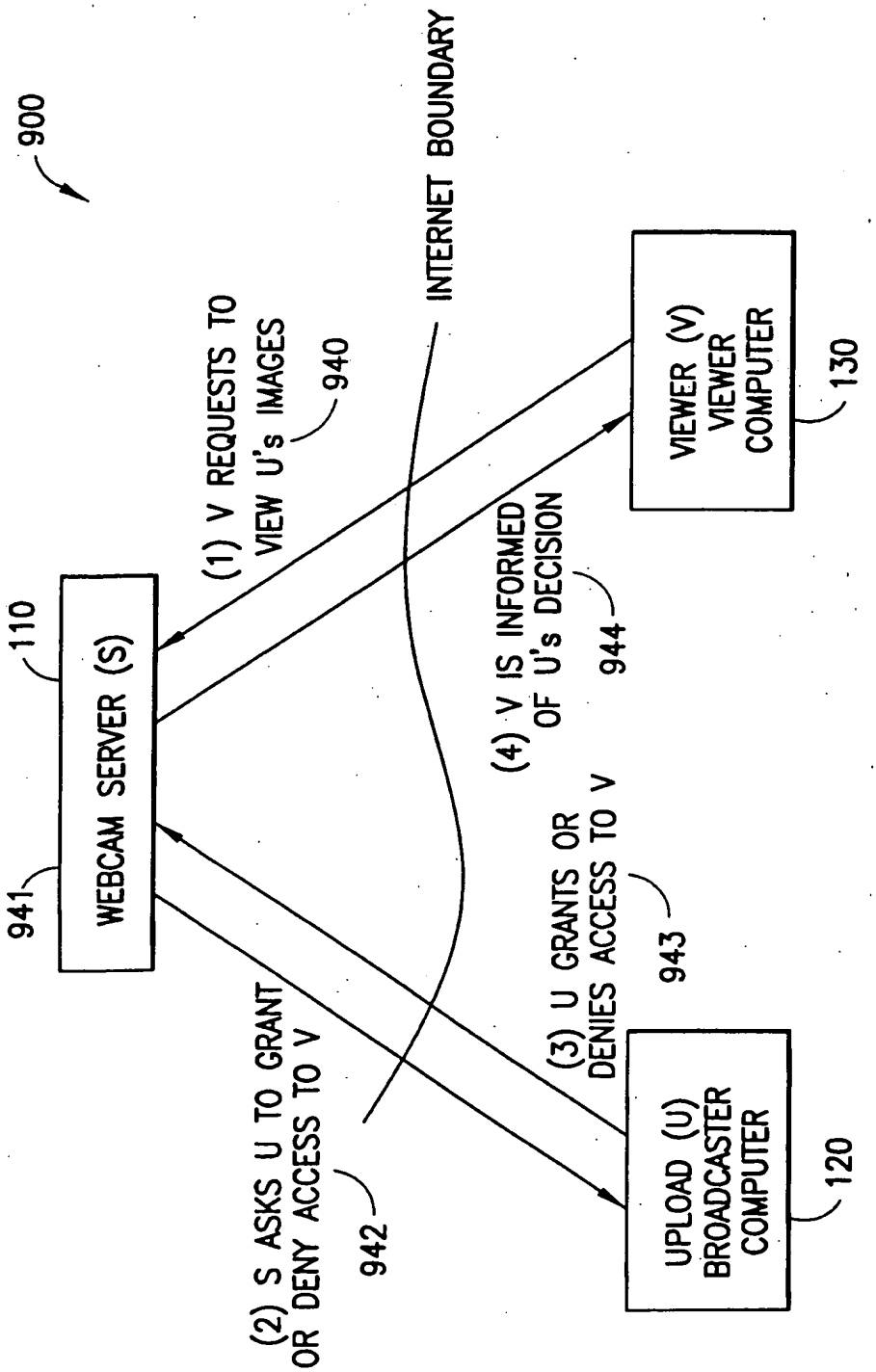
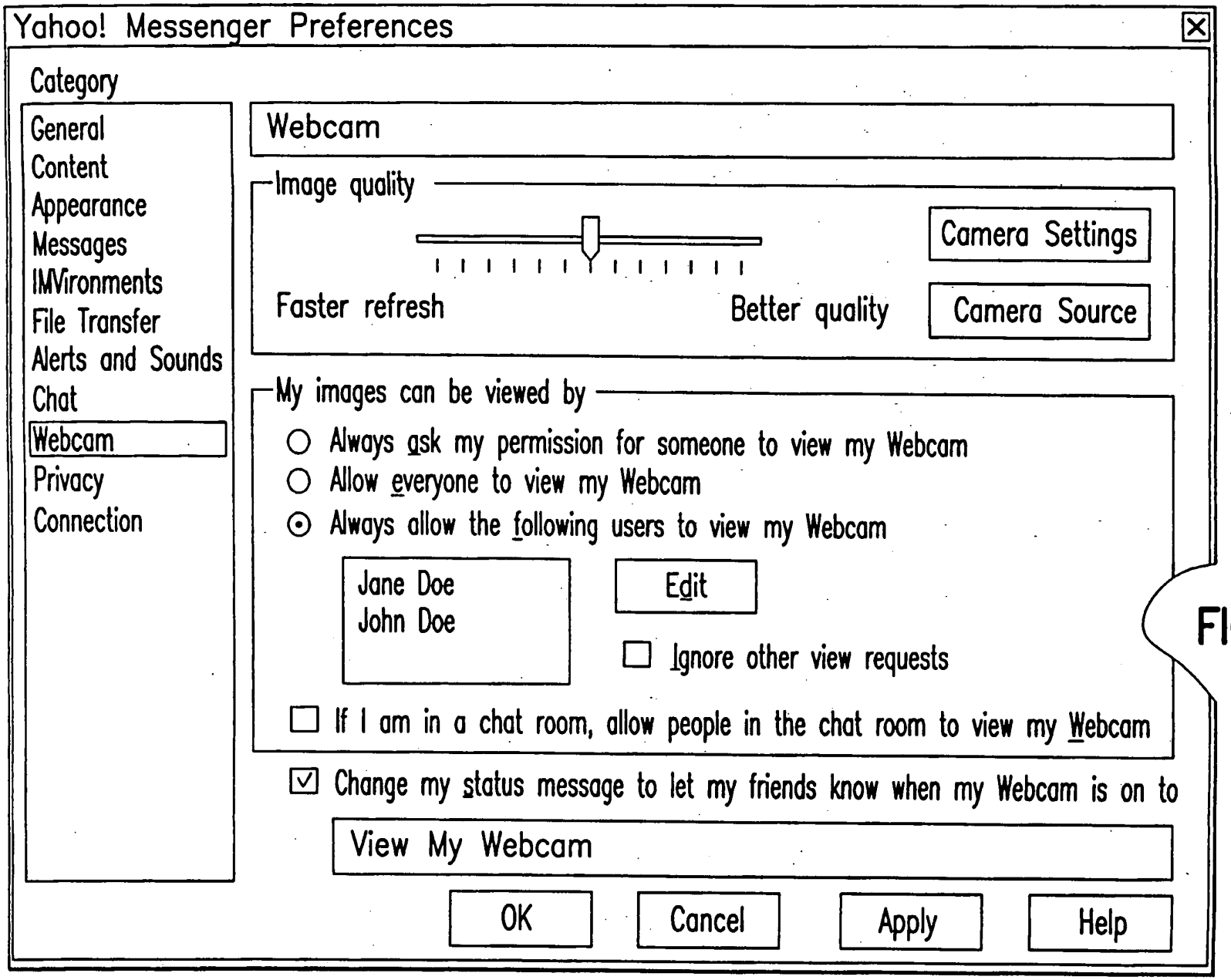

900
INTERNET BOUNDARY
(1) V REQUESTS TO VIEW U's IMAGES
940
WEBCAM SERVER (S)
110
941
VIEWER (V) VIEWER COMPUTER
130
(4) V IS INFORMED OF U's DECISION
944
(2) S ASKS U TO GRANT OR DENY ACCESS TO V
942
(3) U GRANTS OR DENIES ACCESS TO V
943
UPLOAD (U) BROADCASTER COMPUTER
120

FIG.9



1000

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FIG.10

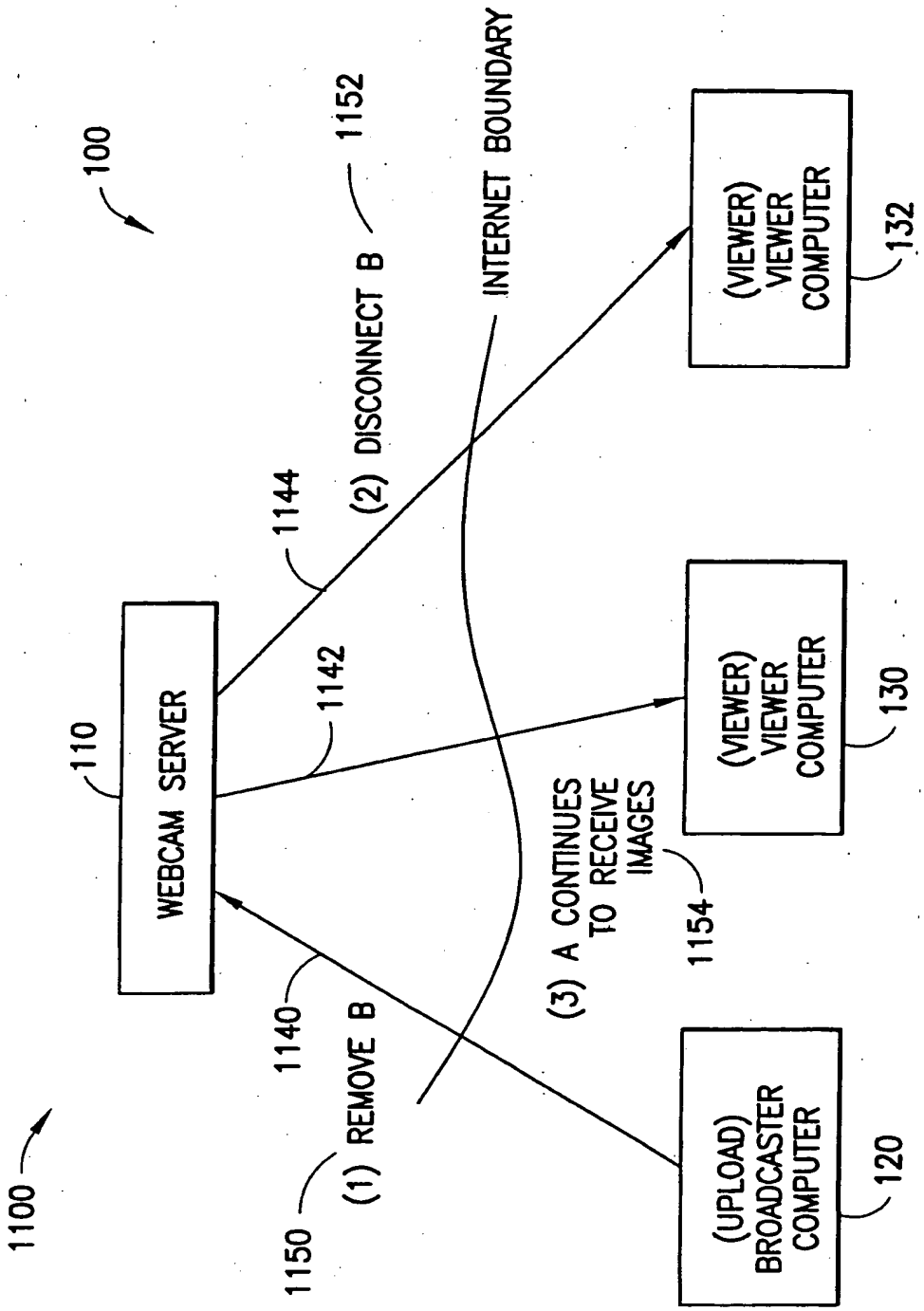

1100
100
WEBCAM SERVER
110
(UPLOAD)
BROADCASTER
COMPUTER
120
(VIEWER)
VIEWER
COMPUTER
130
(VIEWER)
VIEWER
COMPUTER
132
INTERNET BOUNDARY
1140
(1) REMOVE B
1150
1142
1144
(2) DISCONNECT B
1152
(3) A CONTINUES
TO RECEIVE
IMAGES
1154

FIG.11

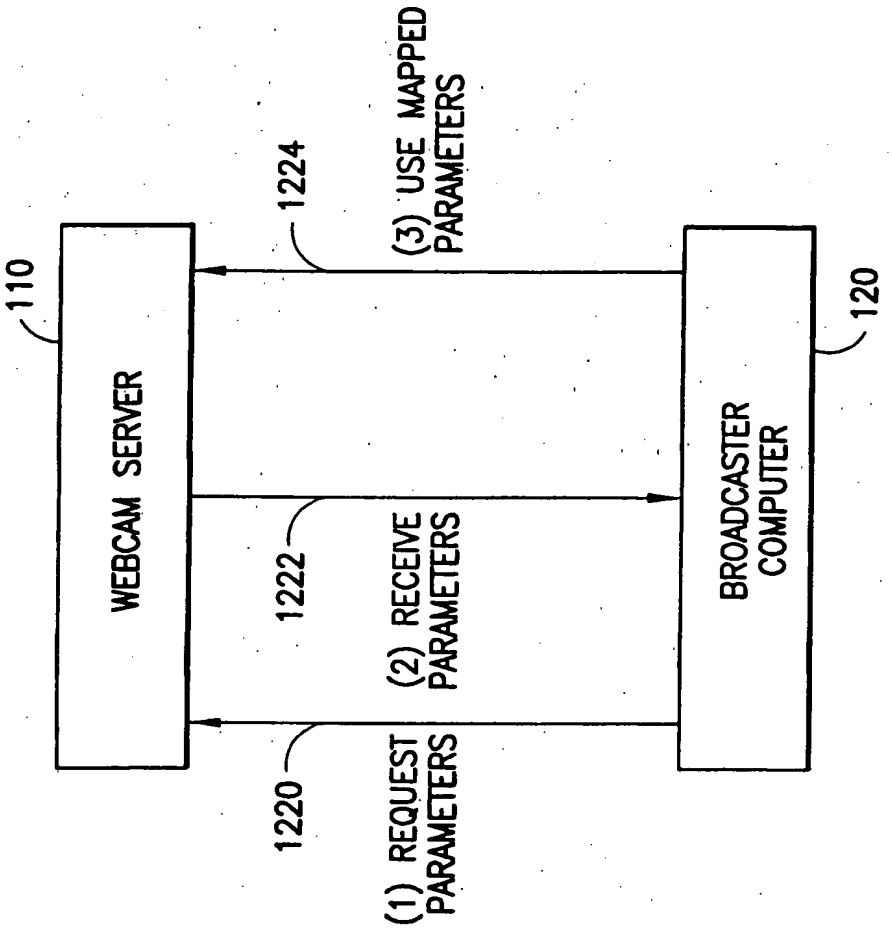

110
WEBCAM SERVER
1224
(3) USE MAPPED PARAMETERS
1222
(2) RECEIVE PARAMETERS
1220
(1) REQUEST PARAMETERS
120
BROADCASTER COMPUTER

FIG.12

UNIVERSAL DATABASE

USER ID
USER PASSWORD
USER NAME
MAIL PREFERENCE 1
APPLICATION PREFERENCE 1
ADDRESS BOOK ENTRY 1
.
.
.

1310

MASTER SESSION TABLE (ON MASTER SERVER)

SESSION 1	USER1 ID	IP ADDR 1	LAST UPDATE 1
SESSION 2	USER2 ID	IP ADDR 2	LAST UPDATE 2
SESSION 3	USER3 ID	IP ADDR 3	LAST UPDATE 3
SESSION 4	USER4 ID	IP ADDR 4	LAST UPDATE 4
.			
.			
.			

1320

CONTROL AND MONITORING TABLE

VIEWER PAUSE STATUS	UPLOADER PAUSE STATUS
VIEWER START STATUS	
VIEWER LEAVE STATUS	
VIEWER COUNT	
PEER-TO-PEER INITIATE STATUS	
THROW VIEWER	
PING VIEWER	
.	
.	
.	

1330

FIG.13A

MASTER VIEWER SESSION TABLE

1340

VIEWER1	UPLOADER1 (SLAVE IP OF UPLOADER1)	UPLOADER2 (SLAVE IP OF UPLOADER2)
VIEWER2	UPLOADER1 (SLAVE IP OF UPLOADER1)	
.		
.		
.		

SLAVE SESSION TABLE

VIEWER1	CONNECTION SPEED	VIEWER1 NAME	VIEWER1 ROOM NAME	VIEWER1 IP ADDRESS	
VIEWER2	CONNECTION SPEED	VIEWER2 NAME	VIEWER2 ROOM NAME	VIEWER2 IP ADDRESS	1350
⋮					

CONFIGURATION FILE

IMAGE QUALITY
IMAGE SIZE
⋮

1360

FIG.13B

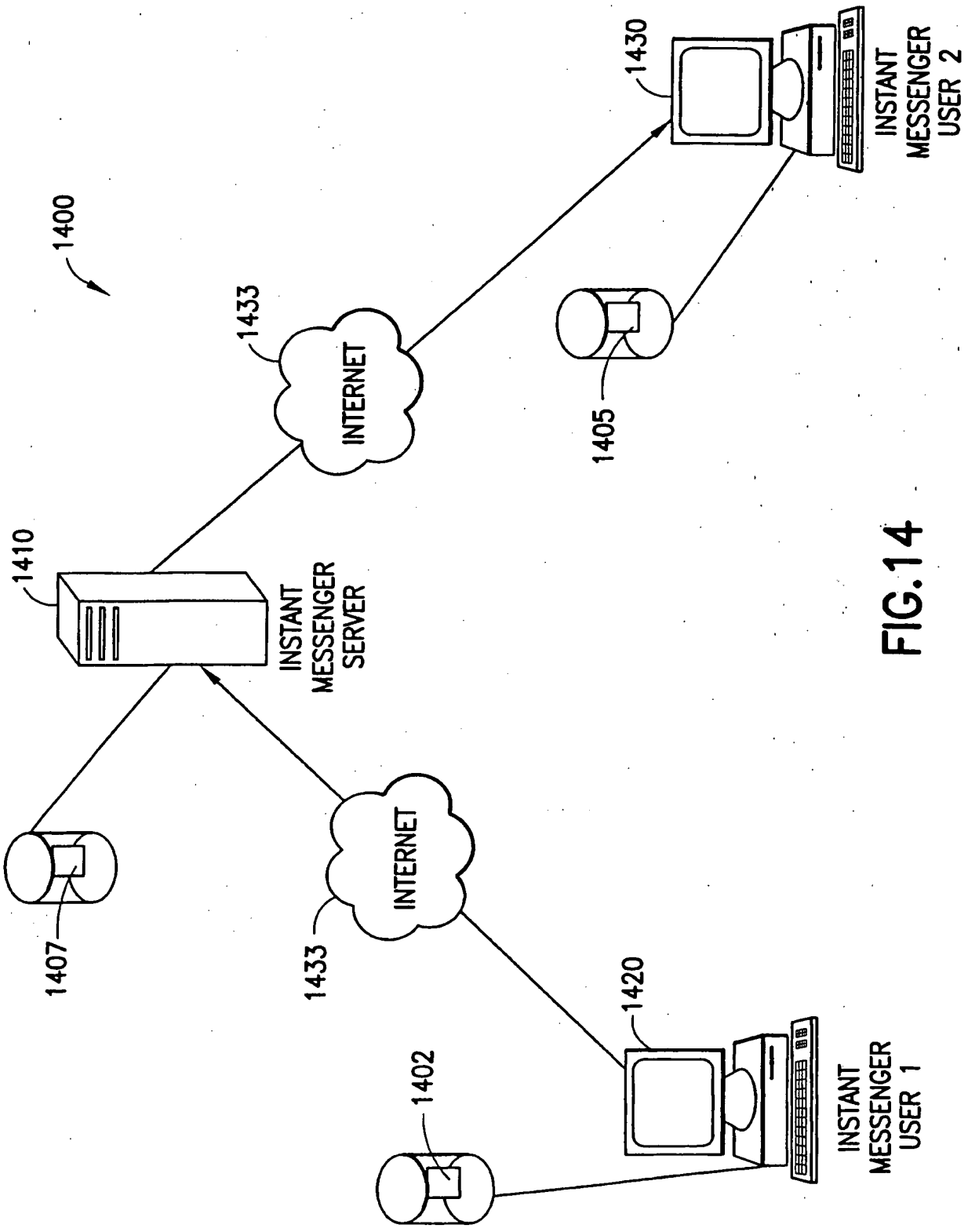

1400
1433
INTERNET
1430
INSTANT MESSENGER USER 2
1405
1410
INSTANT MESSENGER SERVER
1407
1433
INTERNET
1420
1402
INSTANT MESSENGER USER 1

FIG.14

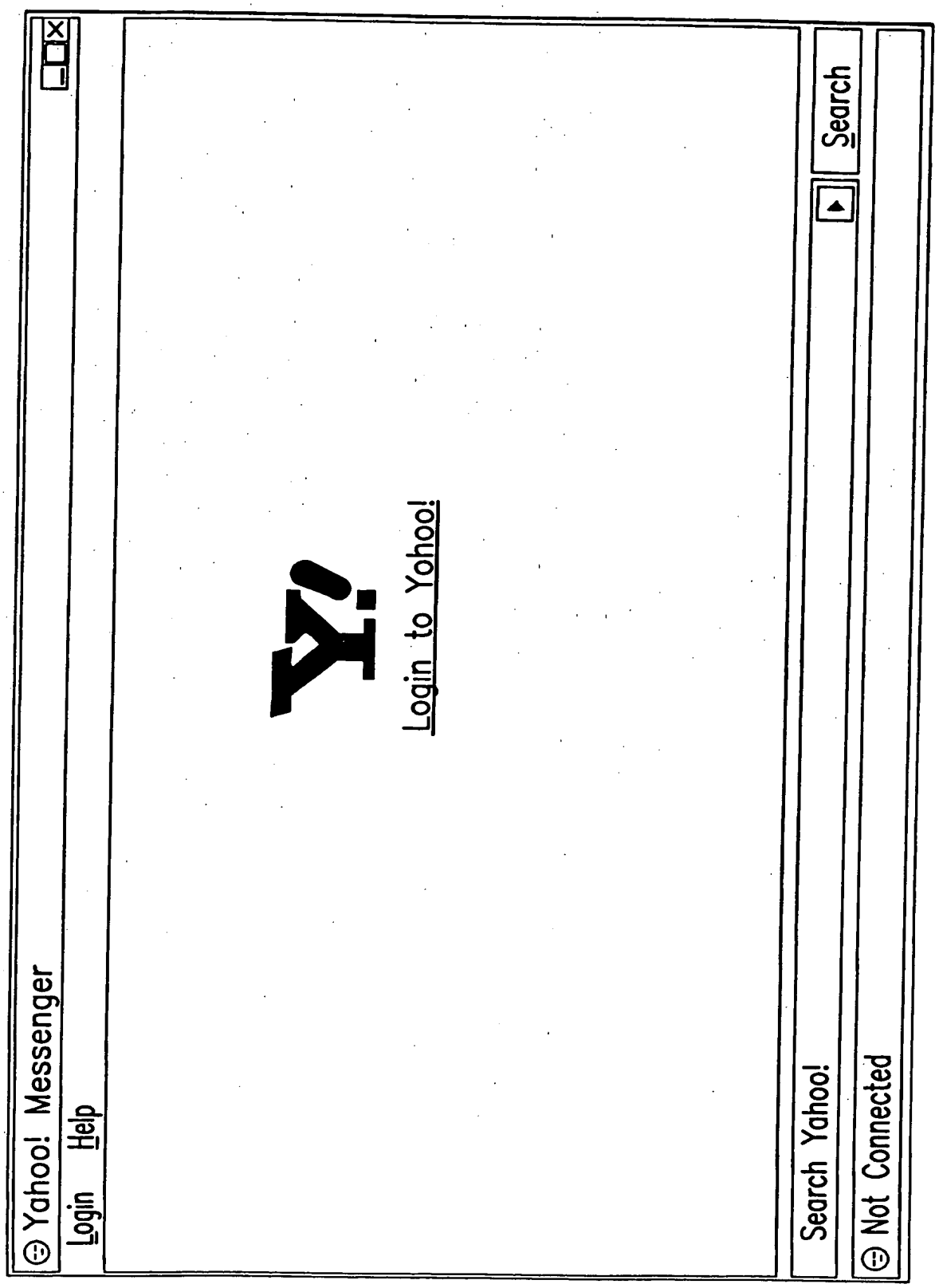

Yahoo! Messenger
Login Help
Login to Yahoo!
Search Yahoo!
Search
Not Connected
1500

FIG.15

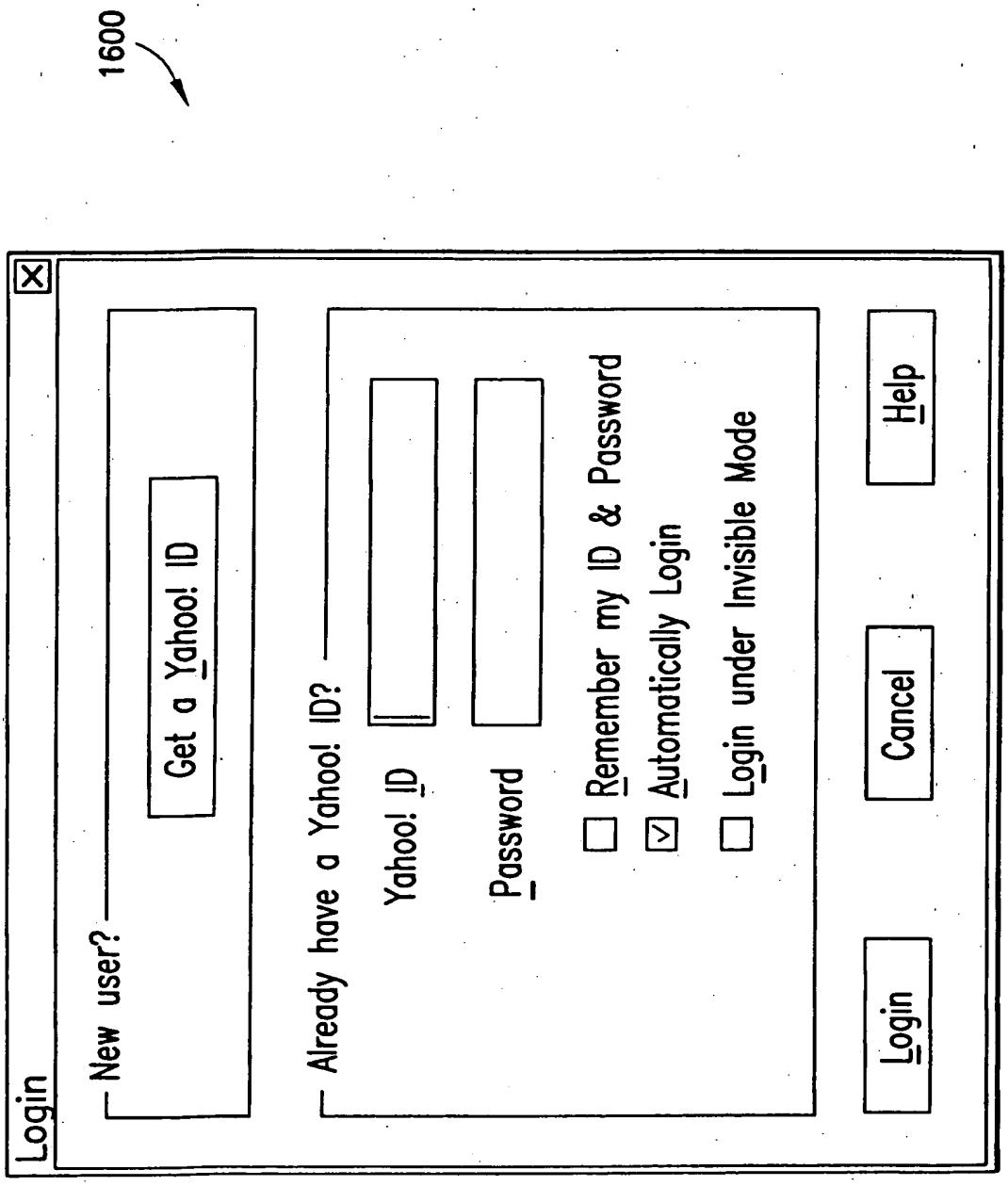

1600
Login
New user?
Get a Yahoo! ID
Already have a Yahoo! ID?
Yahoo! ID
Password
Remember my ID & Password
Automatically Login
Login under Invisible Mode
Login
Cancel
Help

FIG.16

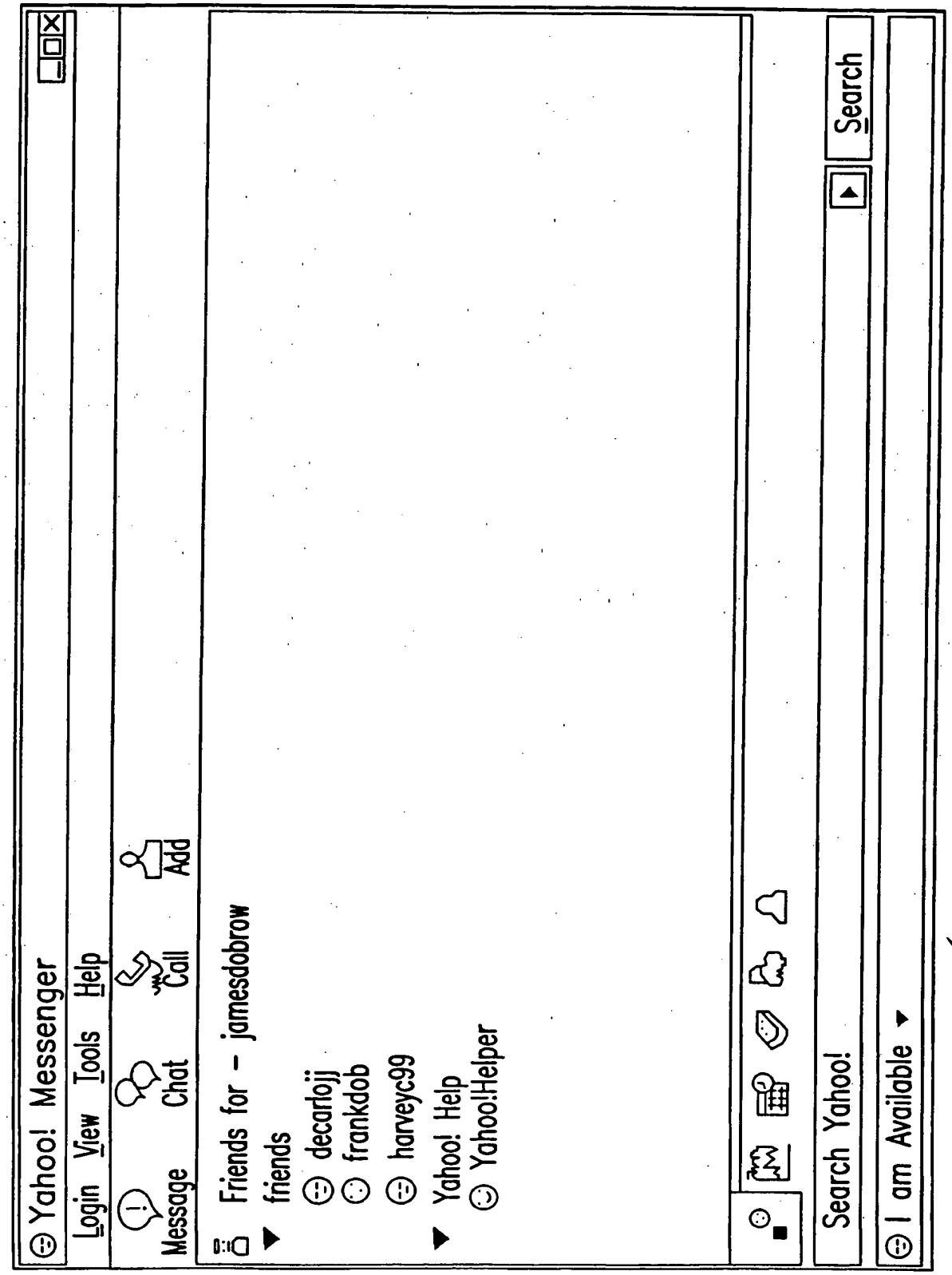

Yahoo! Messenger
Login View Tools Help
Message
Chat
Call
Add
Friends for - jamesdobrow
friends
decarlojj
frankdob
harveyc99
Yahoo! Help
Yahoo!Helper
Search Yahoo!
Search
I am Available
1700

FIG.17

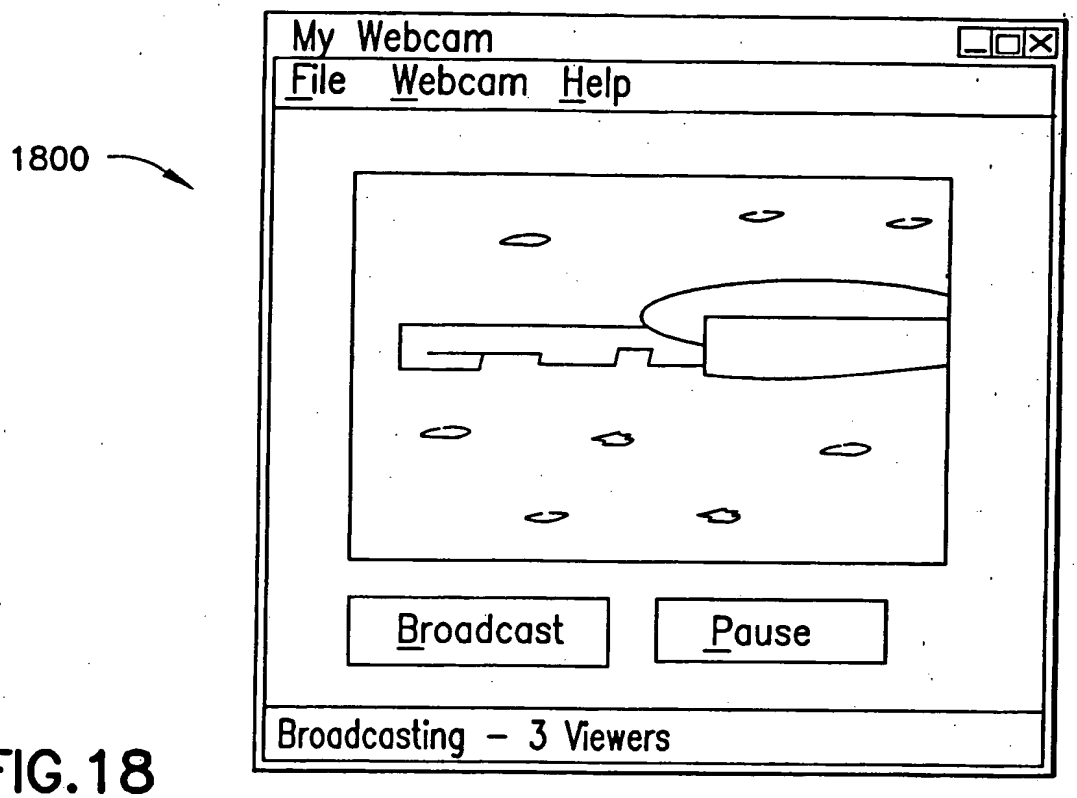

1800
My Webcam
File Webcam Help
Broadcast
Pause
Broadcasting – 3 Viewers

FIG.18

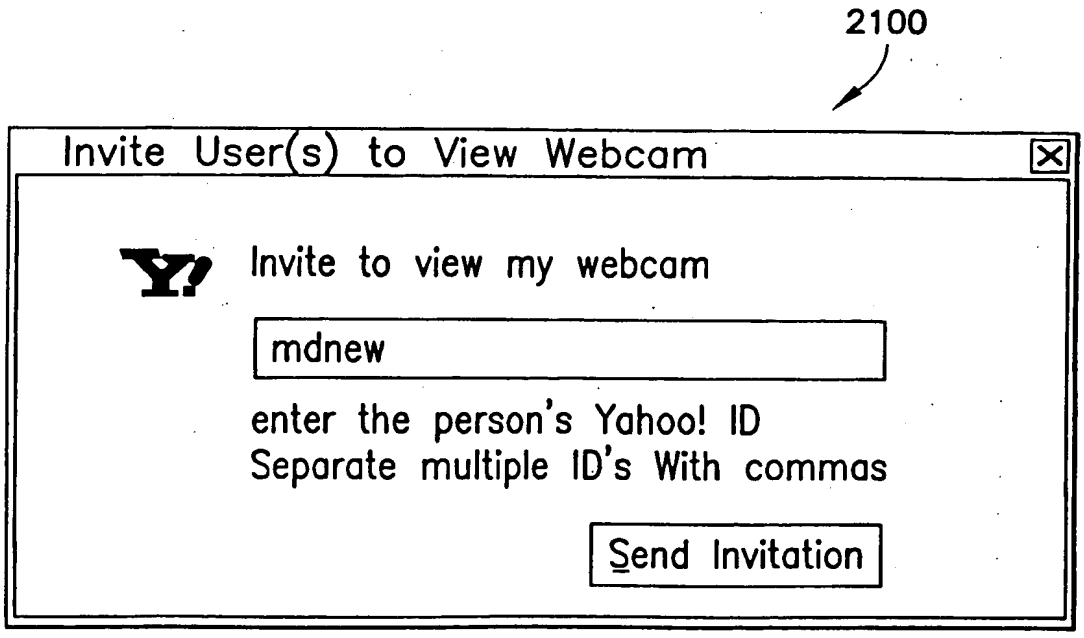
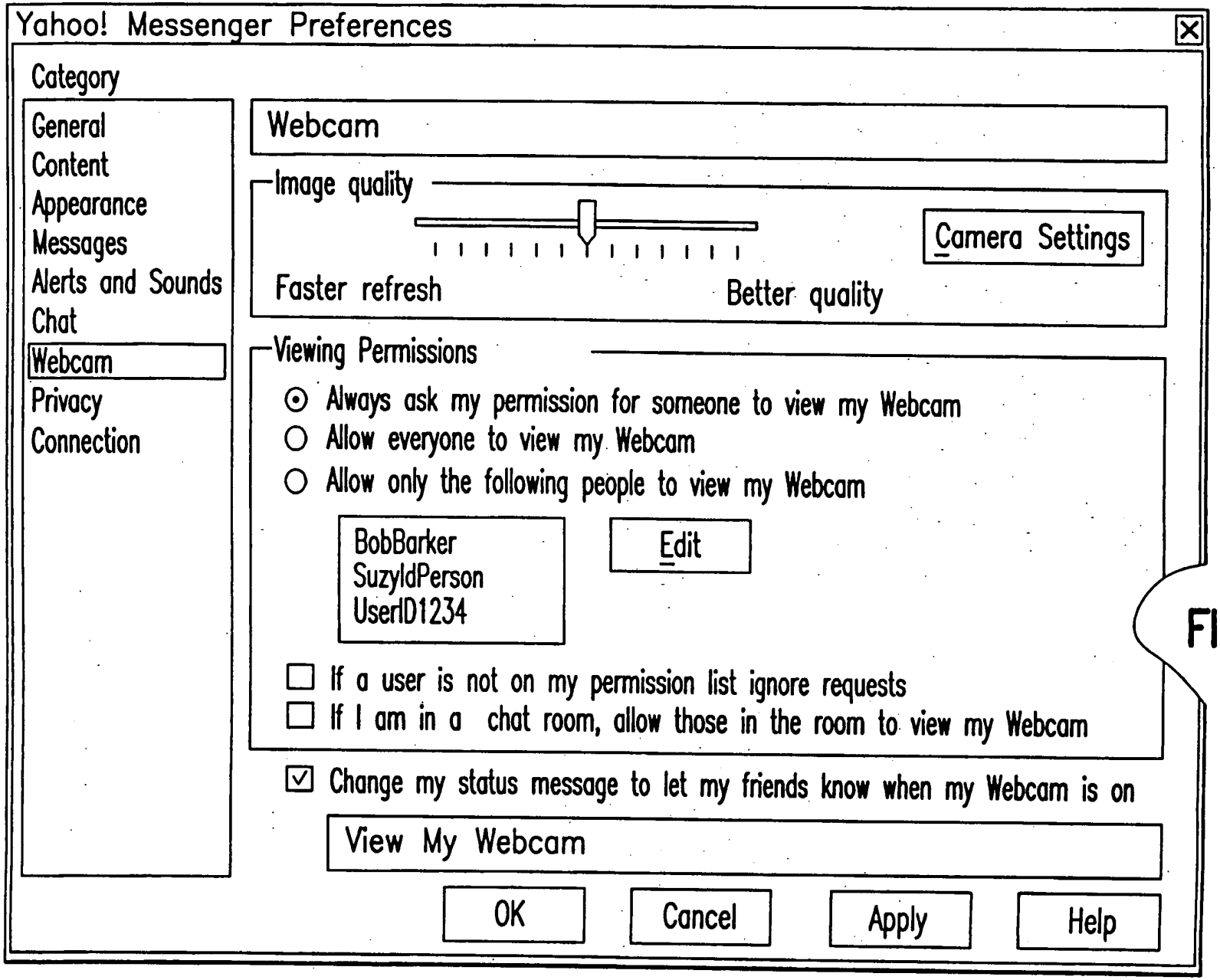
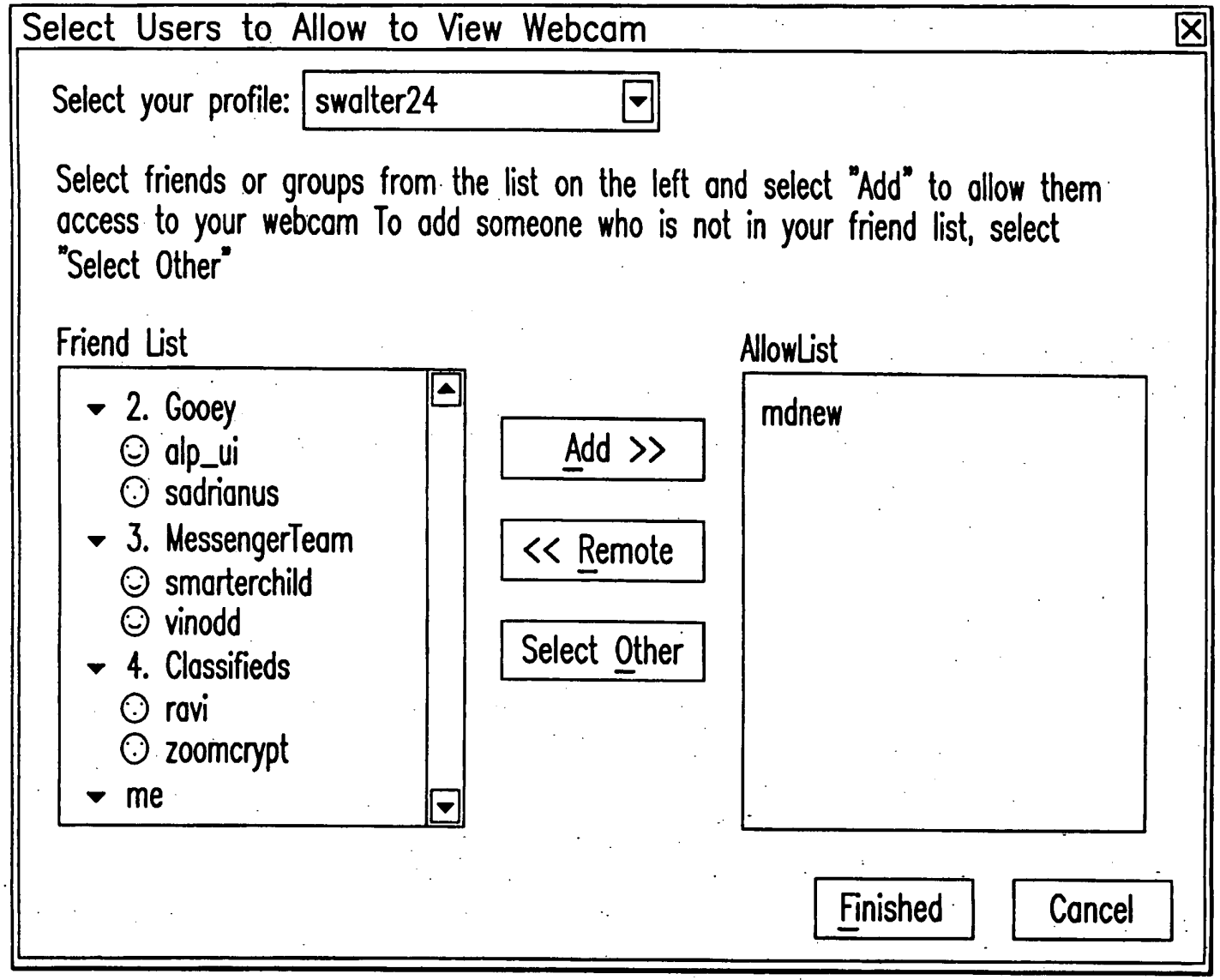

2100
Invite User(s) to View Webcam
Invite to view my webcam
mdnew
enter the person's Yahoo! ID
Separate multiple ID's With commas
Send Invitation

FIG.21


Yahoo! Messenger Preferences
Category
General
Content
Appearance
Messages
Alerts and Sounds
Chat
Webcam
Privacy
Connection
Webcam
Image quality
Faster refresh
Better quality
Camera Settings
Viewing Permissions
Always ask my permission for someone to view my Webcam
Allow everyone to view my Webcam
Allow only the following people to view my Webcam
BobBarker
SuzyIdPerson
UserID1234
Edit
If a user is not on my permission list ignore requests
If I am in a chat room, allow those in the room to view my Webcam
Change my status message to let my friends know when my Webcam is on
View My Webcam
OK
Cancel
Apply
Help

1900

FIG.19


Select Users to Allow to View Webcam
Select your profile: swalter24
Select friends or groups from the list on the left and select "Add" to allow them access to your webcam To add someone who is not in your friend list, select "Select Other"
Friend List
2. Gooey
alp_ui
sadrianus
3. MessengerTeam
smarterchild
vinodd
4. Classifieds
ravi
zoomcrypt
me
Add >>
<< Remote
Select Other
AllowList
mdnew
Finished
Cancel

2000

FIG.20

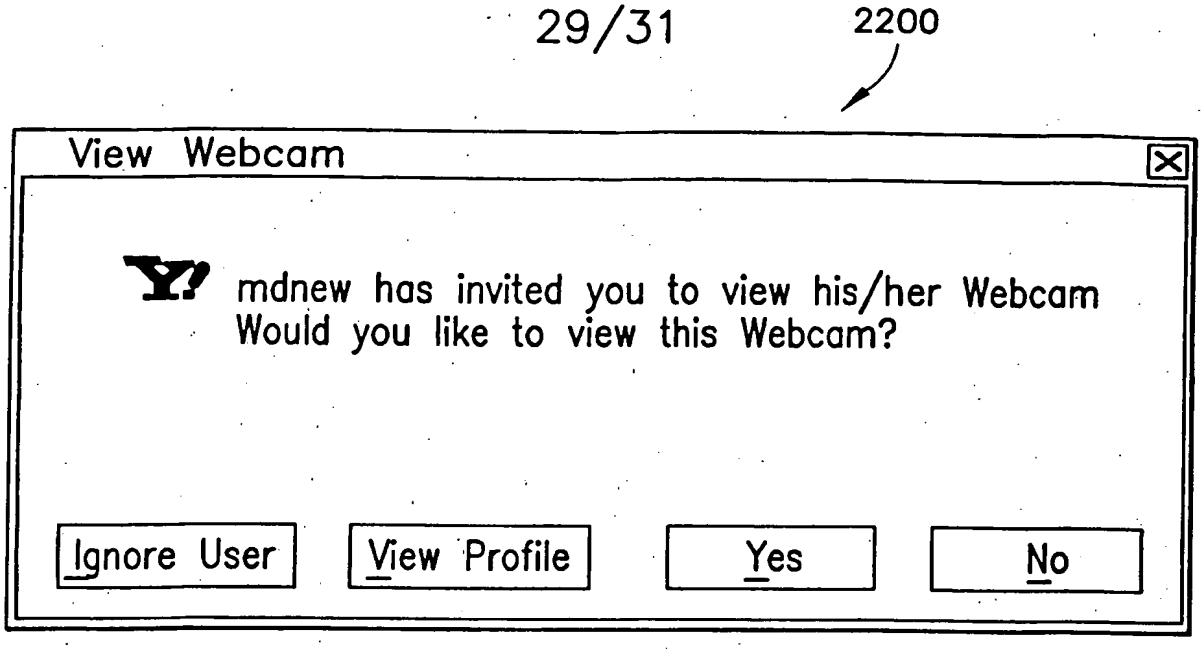

2200
View Webcam
mdnew has invited you to view his/her Webcam
Would you like to view this Webcam?
Ignore User
View Profile
Yes
No

FIG.22

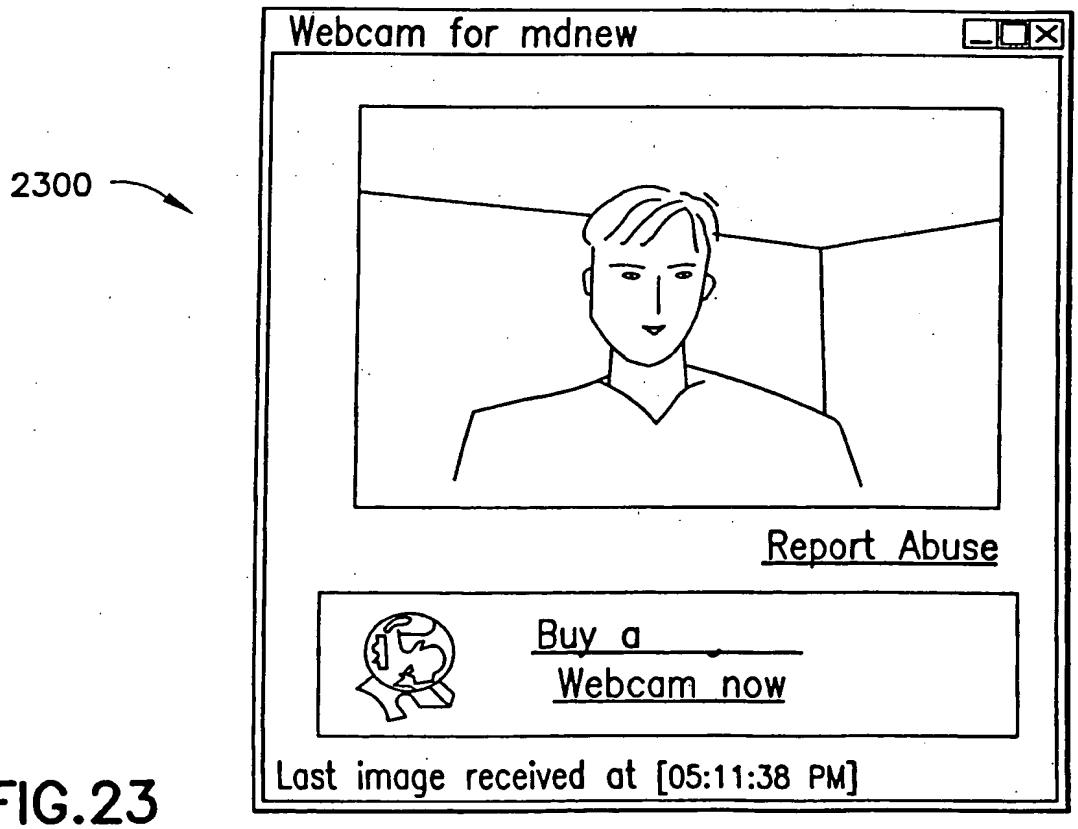

2300
Webcam for mdnew
Report Abuse
Buy a
Webcam now
Last image received at [05:11:38 PM]

FIG.23

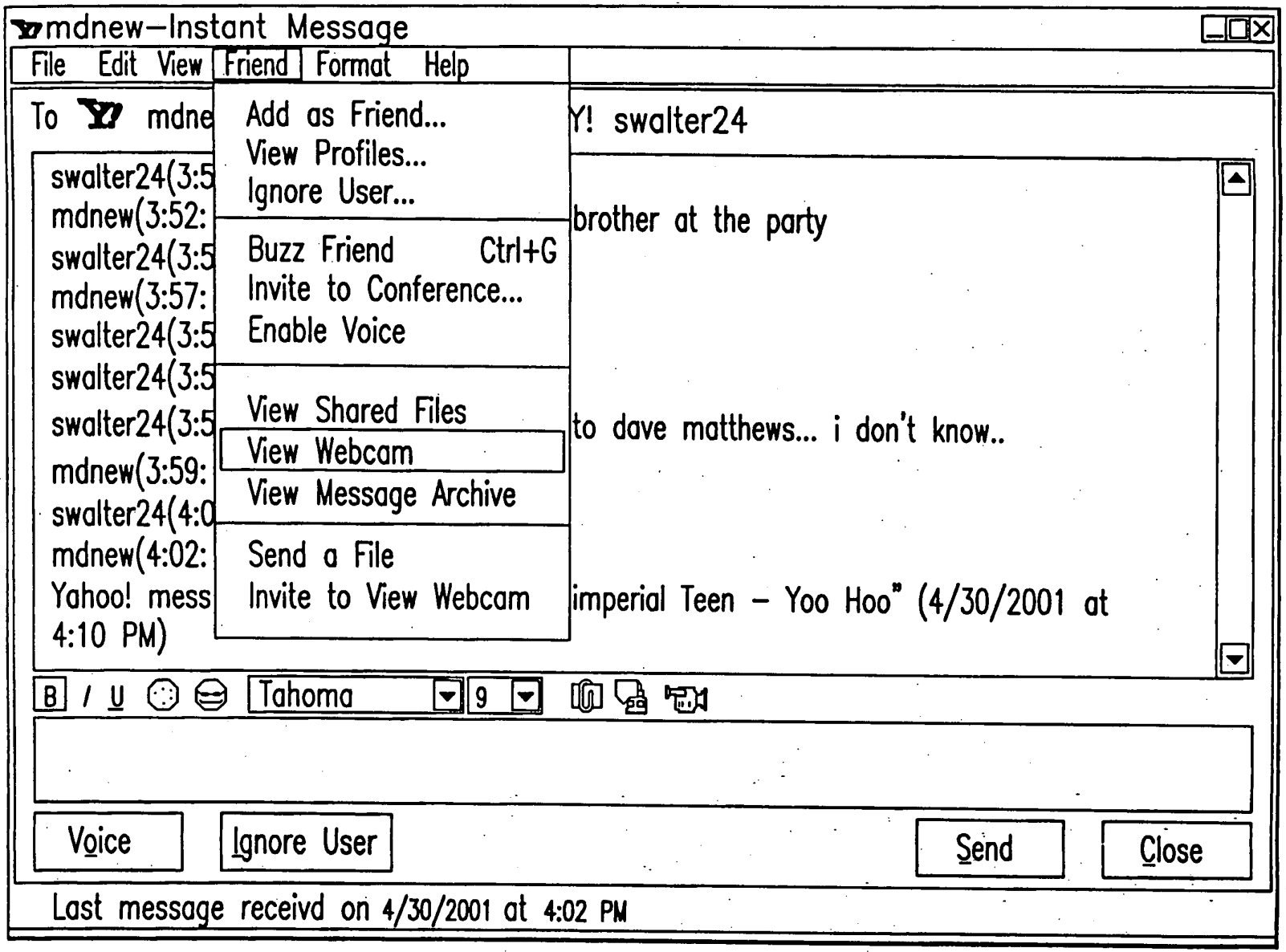

mdnew–Instant Message
File Edit View Friend Format Help
To mdne
Y! swalter24
swalter24(3:5
mdnew(3:52:
swalter24(3:5
mdnew(3:57:
swalter24(3:5
swalter24(3:5
swalter24(3:5
mdnew(3:59:
swalter24(4:0
mdnew(4:02:
Yahoo! mess
4:10 PM)
brother at the party
to dave matthews... i don't know..
imperial Teen – Yoo Hoo" (4/30/2001 at
Add as Friend...
View Profiles...
Ignore User...
Buzz Friend Ctrl+G
Invite to Conference...
Enable Voice
View Shared Files
View Webcam
View Message Archive
Send a File
Invite to View Webcam
B I U
Tahoma
9
Voice
Ignore User
Send
Close
Last message receivd on 4/30/2001 at 4:02 PM
2400

FIG.24

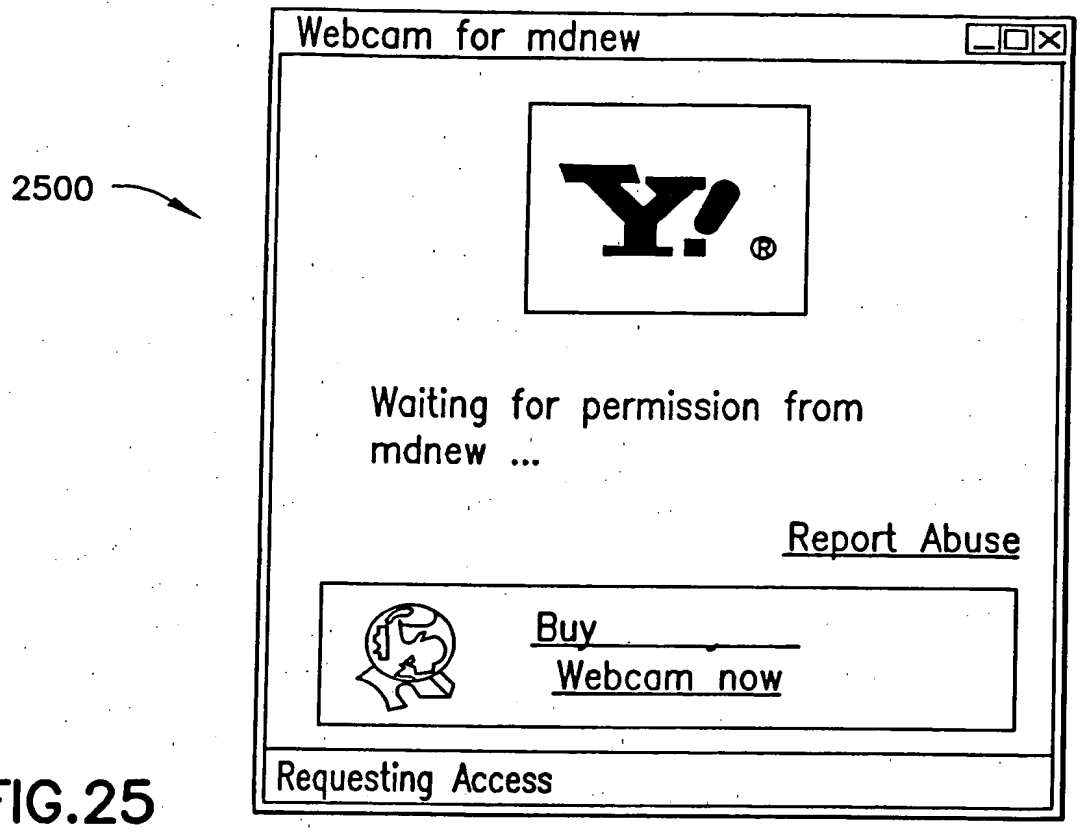

2500
Webcam for mdnew
Waiting for permission from mdnew ...
Report Abuse
Buy Webcam now
Requesting Access

FIG.25

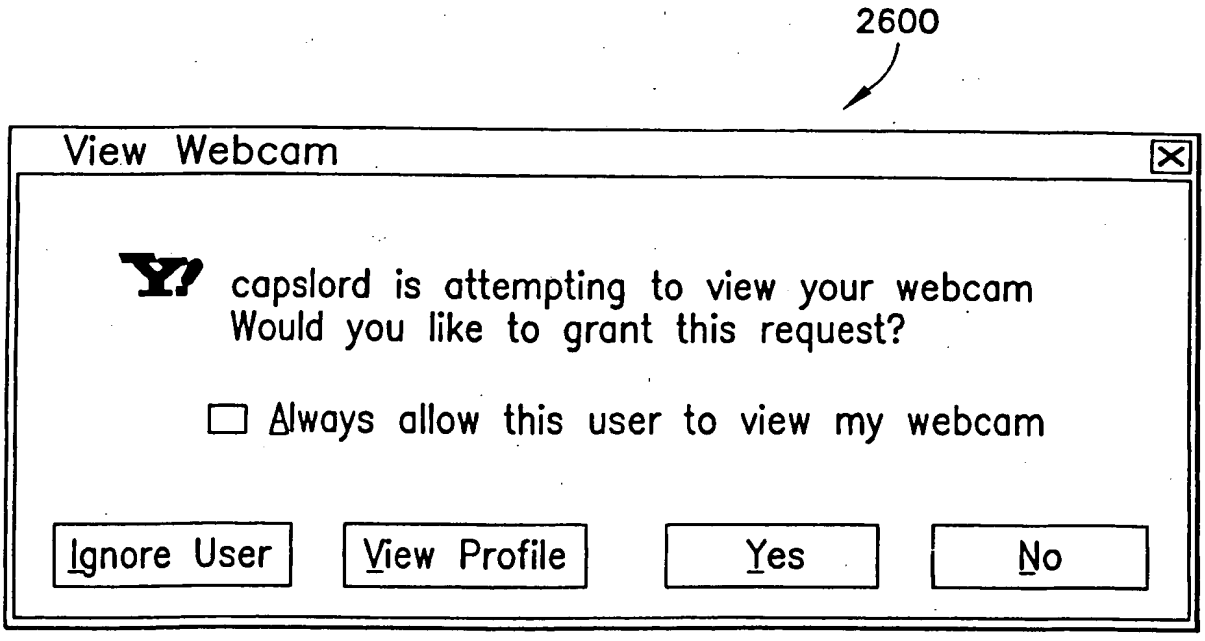

2600
View Webcam
capslord is attempting to view your webcam
Would you like to grant this request?
Always allow this user to view my webcam
Ignore User
View Profile
Yes
No

FIG.26